

## Document Transmittal Form

**TO :** NRC C/O PINCKNEY, DAVID  
DOCUMENT CONTROL DESK  
WASHINGTON, DC 20555

**ID :** EPIP059

**Date :** 10/04/2002

Please update your controlled set of documents with the following documents:

Document ID	Revision	Status	Quantity	Format	RecNo
PRC NC.EP-EP.ZZ-0313 000	2	A	1	H	147081

This acknowledgement receipt must be returned to:

**Document Management  
PSEG Nuclear  
PO Box 236  
Hancocks Bridge, NJ 08038**

**MC N04**

Your signature below verifies that.

(1) the above documents have been filed and superseded documents have been removed and destroyed or clearly marked as obsolete.

(2) the mailing address and copyholder information are correct or corrections have been identified on this transmittal

☐ Place checkmark here to be removed from controlled distribution

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

A045

## Document Transmittal Form

**TO :** NRC C/O PINCKNEY, DAVID  
DOCUMENT CONTROL DESK  
WASHINGTON, DC 20555

**ID :** EPIP059

**Date :** 10/04/2002

Please update your controlled set of documents with the following documents:

Document ID	Revision	Status	Quantity	Format	RecNo
PRC NC.EP-EP.ZZ-0601 000	5	A	1	H	146916
PRC NC EP-EP.ZZ-0310 000	5	A	1	H	146880
PRC NC.EP-EP.ZZ-0602 000	2	A	1	H	146937
PRC AIEE TOC 000	11	A	1	H	146958
PRC NC.EP-EP.ZZ-0309 000	5	A	1	H	146836
PRC EPIP-TOC-COMMON 000	26	A	1	H	146987

This acknowledgement receipt must be returned to.

**Document Management  
PSEG Nuclear  
PO Box 236  
Hancocks Bridge, NJ 08038**

**MC N04**

Your signature below verifies that:

(1) the above documents have been filed and superseded documents have been removed and destroyed or clearly marked as obsolete.

(2) the mailing address and copyholder information are correct or corrections have been identified on this transmittal

☐ Place checkmark here to be removed from controlled distribution

Signature \_\_\_\_\_

Date: \_\_\_\_\_

PSEG NUCLEAR LLC  
EOF IMPLEMENTING PROCEDURES  
October 4, 2002

CHANGE PAGES FOR  
REVISION #11

The Table of Contents forms a general guide to the current revision of each section of the EOF EPIP. The changes that are made in this TOC Revision #11 are shown below. Please check that your revision packet is complete and remove the outdated material listed below:

ADD			REMOVE		
Page	Description	Rev.	Page	Description	Rev.
All	T.O.C.	11	All	T.O.C.	10
All	NC.EP-EP.ZZ-0601	05	ALL	NC.EP-EP.ZZ-0603	04
All	NC.EP-EP.ZZ-0602	02	ALL	NC.EP-EP.ZZ-0603	01

**PSEG NUCLEAR LLC EMERGENCY PLAN  
EOF IMPLEMENTING PROCEDURES  
TABLE OF CONTENTS  
October 4, 2002**

AIEE TOC  
EOF  
Page 1 of 1  
**PSEG  
CONTROL  
COPY # EP1059**

**EMERGENCY OPERATIONS FACILITY (EOF) PROCEDURES**

<b>EMERGENCY COORDINATOR RESPONSE:</b>		<b><u>Revision Number</u></b>	<b><u>Number of Pages</u></b>	<b><u>Effective Date</u></b>
NC.EP-EP.ZZ-0401(Q)	Emergency Preparedness Coordinator Response	02	6	02/06/2002
NC.EP-EP.ZZ-0402(Q)	Site Support Manager Team Response – EOF	02	6	02/06/2002
NC.EP-EP.ZZ-0403(Q)	Public Information Liaison (PIL) – EOF	03	4	03/14/2002
NC.EP-EP.ZZ-0404(Q)	Protective Action Recommendations (PARS) Upgrades	01	10	09/14/2000
NC.EP-EP.ZZ-0405(Q)	Emergency Termination/ Reduction/Recovery	01	22	02/29/2000
<b>ENGINEERING RESPONSE (EOF):</b>				
NC.EP-EP.ZZ-0501(Q)	EOF – Integrated Engineering Response	01	6	02/06/2002
<b>RADIATION PROTECTION RESPONSE (EOF):</b>				
NC.EP-EP.ZZ-0601(Q)	Radiological Support Manager And Radiological Assessment Staff Response	05	24	10/04/2002
NC.EP-EP.ZZ-0602(Q)	EOF Radiological Dose Assessment	02	19	10/04/2001
NC.EP-EP.ZZ-0603(Q)	Field Monitoring	05	49	07/03/2002
NC.EP-EP.ZZ-0604(Q)	Helicopter Plume Tracking	01	10	05/24/2001
<b>ADMINISTRATIVE SUPPORT RESPONSE (EOF):</b>				
NC.EP-EP.ZZ-0701(Q)	Administrative Support - EOF	05	16	03/14/2002

**PSEG NUCLEAR LLC**NC.EP-EP.ZZ-0601 (Q) - REV. 05**RADIOLOGICAL SUPPORT MANAGER AND RADIOLOGICAL ASSESSMENT STAFF  
RESPONSE**

USE CATEGORY: II

**REVISION SUMMARY:****PSE&G  
CONTROL  
COPY # EP1P059**

1. This revision satisfies the requirement for a biennial review.
2. Deleted Attachment 7, SPDS Operating Instructions. The information contained in Attachment 7 is now in NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.
3. Deleted Form – 4, SPDS Log, and renumbered Form – 5 to Form – 4. The information contained in Form - 4 is now in NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.
4. Revised the reference in Attachment 3, second bullet, from Attachment 7 to NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.
5. Added cross reference NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.

**IMPLEMENTATION REQUIREMENTS**Implementation Date: 10/4/02

APPROVED: \_\_\_\_\_

  
Emergency Preparedness Manager9/19/02  
Date

APPROVED: \_\_\_\_\_

N/A  
Vice President - OperationsN/A  
Date

**RADIOLOGICAL SUPPORT MANAGER AND RADIOLOGICAL ASSESSMENT STAFF  
RESPONSE**

**TABLE OF CONTENTS**

<b>Section</b>	<b>Title</b>	<b>Page</b>
1.0	PURPOSE	2
2.0	PREREQUISITES .....	2
	2.1 Prerequisites To Be Followed Prior To Implementing This Procedure ...	2
3.0	PRECAUTIONS AND LIMITATIONS.....	2
	3.1 Precaution and Limitations To Be Followed Prior To Implementing This Procedure .....	2
4.0	EQUIPMENT REQUIRED .....	2
5.0	PROCEDURE .....	3
	5.1 RSM Duties .....	3
6.0	RECORDS .....	3
7.0	REFERENCES .....	3
	7.1 References .....	3
	7.2 Cross References .....	3
<b>ATTACHMENTS</b>		
	ATTACHMENT 1 - Pre-activation RSM Duties .....	4
	ATTACHMENT 2 - RSM Checklist .....	6
	ATTACHMENT 3 - State Liaison And RMS Trending Instructions .....	9
	ATTACHMENT 4 - Habitability, EOF Emergency Ventilation And Maplewood Lab Instructions .....	11
	ATTACHMENT 5 - RMS Quick Reference.....	14
	ATTACHMENT 6 - Operation Of VAX LA120 Terminal.....	18
<b>FORMS</b>		
Form - 1	EOF Dosimetry Log .....	25
Form - 2	EOF TLD Issue and Control Log .....	26
Form - 3	EOF Habitability Log .....	27
Form - 4	MIDAS Data Form .....	29

## 1.0 **PURPOSE**

To outline and describe the Radiological Support Manager's (RSM) duties during a declared emergency

## 2.0 **PREREQUISITES**

### 2.1 **Prerequisites To Be Followed Prior To Implementing This Procedure**

Implement this procedure at:

- The discretion of the ERM.
- Upon staffing of the EOF.

## 3.0 **PRECAUTIONS AND LIMITATIONS**

### 3.1 **Precaution and Limitations To Be Followed Prior To Implementing This Procedure**

3.1.1 Medical care takes priority over any radiological conditions unless the radiological conditions are life threatening.

3.1.2 It is recommended that initials be used in the place keeping sign-offs, instead of checkmarks, if more than one person may implement this procedure.

3.1.3 Personnel who implement this procedure shall be trained and qualified IAW the Emergency Plan.

3.1.4 All steps listed in this procedure may be implemented at users discretion.

## 4.0 **EQUIPMENT REQUIRED**

As provided in the EOF.

## 5.0 PROCEDURE

### 5.1 RSM Duties

5.1.1 REPORT to the ERM to receive a briefing of the current status of the emergency. \_\_\_\_\_

5.1.2 UPDATE the ERM of changing radiological conditions, as appropriate. \_\_\_\_\_

5.1.3 IMPLEMENT Attachment 1, Pre-activation RSM Checklist. \_\_\_\_\_

## 6.0 RECORDS

Return completed procedure and any information or data thought to be pertinent to the Emergency Preparedness Manager

## 7.0 REFERENCES

### 7.1 References

None

### 7.2 Cross References

7.2.1 NC.EP-EP.ZZ-0602(Q) Radiological Dose Assessment

7.2.2 NC.EP-EP.ZZ-0603(Q) Field Team Monitoring

7.2.3 NC.EP-AP.ZZ-1014(Q), Emergency Preparedness Classroom Training Administration

7.2.4 NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions |

7.2.5 PSEG Nuclear Emergency Plan



## ATTACHMENT 1

Page 1 of 2

## PRE-ACTIVATION RSM CHECKLIST

1.0 **PRE-ACTIVATION RSM CHECKLIST**1.1 **RSM Should Ensure The Following Items are Performed:**

1.1.1 INITIATE the RSM log. \_\_\_\_\_

1.1.2 CONTACT the RAC for a current briefing of the on/offsite radiological conditions. \_\_\_\_\_

1.1.3 ASSIGN the Radiological Assessment Staff Members (D2's) functions are as follows:

• **Dose Assessment**

(Refer to NC.EP-EP.ZZ-0602(Q), Radiological Dose Assessment):

\_\_\_\_\_/\_\_\_\_\_  
(Name) (Name)• **Habitability, EOF Emergency Ventilation and Environmental Sampling Issues**

(Refer to Attachment 4, Habitability, EOF Emergency Ventilation and Maplewood Lab Instructions):

\_\_\_\_\_/\_\_\_\_\_  
(Name) (Name)• **RMS and Meteorological (MET) Trending and Forecast**

(Refer to Attachment 3, State Liaison and RMS Trending Instructions):

\_\_\_\_\_/\_\_\_\_\_  
(Name) (Name)• **Coordinating and Tracking Offsite Field Teams Location and Sampling**

(Refer to NC.EP-EP.ZZ-0603 (Q), Field Monitoring):

\_\_\_\_\_/\_\_\_\_\_  
(Name) (Name)• **State Liaison**

(Refer to Attachment 3, State Liaison and RMS Trending Instructions):

\_\_\_\_\_/\_\_\_\_\_  
(Name) (Name)

1.1.4 ENSURE the Radiological Assessment Staff is staffed to perform the D2 tasks as outlined above, as thought appropriate. \_\_\_\_\_

1.1.5 ASSIGN personnel to fill each appropriate function and designate an Assistant RSM. \_\_\_\_\_

**ATTACHMENT 1****Page 2 of 2****1.1.6 VERIFY the following tasks are performed:**

- IF a General Emergency has been declared, THEN Perform EOF habitability every 30 minutes IAW Attachment 4, if thought appropriate. \_\_\_\_\_
- EOF Radiological Assessment equipment is functioning properly. \_\_\_\_\_
- AMS is turned on and the alarm set for 2 times the current background. \_\_\_\_\_
- Dose Assessment can be performed IAW NC.EP-EP.ZZ-0602(Q), Radiological Dose Assessment. \_\_\_\_\_
- Offsite Field Monitoring Teams are functional or in the process of becoming functional. \_\_\_\_\_
- Current and forecast meteorological data has been acquired or is in the process of being acquired. \_\_\_\_\_

**1.1.7 CONTACT the RAC prior to activation of the EOF to receive an update of the Inplant and Onsite radiological conditions.** \_\_\_\_\_**1.1.8 IMPLEMENT Attachment 2, RSM Checklist:**

- Upon completion of Attachment 1. \_\_\_\_\_
- As thought appropriate by the RSM. \_\_\_\_\_

## ATTACHMENT 2

Page 1 of 3

## RSM CHECKLIST

**NOTE**

- The order that these steps may be performed at the RSM's discretion. Asterisk (\*) steps may NOT be delegated.
- Mark steps that are not applicable N/A and explain why the step is N/A on Attachment 8, Completion Sign-off Sheet.

RSM's Name: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
(Print) (Sign) (Date)

## 1.0 RSM CHECKLIST

### **1.1 The RSM Should Ensure The Following Items are Performed:**

- 1.1.1 CONTINUE keeping the RSM log.
- 1.1.2 ENSURE Offsite Radiological Dose Projections are being performed IAW NC.EP-EP.ZZ-0602(Q), Radiological Dose Assessment, and the SSCL Page 2 is being produced every 30 minutes.

**NOTE**

Medical care takes priority over any radiological conditions unless the radiological conditions are life threatening.

- 1.1.3 COORDINATE** the transportation of any contaminated injured person offsite with the RAC.

## ATTACHMENT 2

Page 2 of 3

- 1.1.4 \*AUTHORIZE issuance of KI as appropriate IAW NC.EP-EP.ZZ-305(Q), Stable Thyroid Blocking. \_\_\_\_\_
- 1.1.5 BRIEF EOF Radiological Assessment Staff as changing conditions warrant. \_\_\_\_\_
- 1.1.6 ASSIST with Event Classification. \_\_\_\_\_
- 1.1.7 \*PROVIDE Protective Action Recommendations (PARs), as appropriate, IAW NC.EP-EP.ZZ-0404(Q), Protective Action Recommendations (PAR). \_\_\_\_\_

**NOTE**

A radiological release is in progress when the Noble Gas (NG) Offsite Dose Calculation Manual (ODCM)/Federal Limits are met or exceeded.

Hope Creek ODCM Limits =  $1.20\text{E}+04$  uCi/sec.

Salem NG ODCM Limits =  $2.42\text{E}+05$  uCi/sec.

- 1.1.8 ENSURE Maplewood Lab is contacted by assigned personnel IAW Attachment 4, Instructions For Habitability, EOF Emergency Ventilation, and Maplewood Labs. \_\_\_\_\_
- 1.1.9 PERFORM the following applicable steps if a **RADIOLOGICAL RELEASE** is in progress:
- INFORM the ERM immediately when it is known a radiological release is in progress. \_\_\_\_\_
  - OBTAIN frequent briefings concerning the Offsite Field Team's assignments from Offsite Team Coordinator (OTC) reports. \_\_\_\_\_
  - CONSIDER moving essential equipment from the Guard House and the Processing Center. \_\_\_\_\_
  - OBTAIN ERM approval for the Coast Guard or Helicopter assistance in tracking the plume, if thought necessary. \_\_\_\_\_
  - INITIATE Contamination Controls IAW Step 1.1.10, Part A, of this Attachment. \_\_\_\_\_

## ATTACHMENT 2

## Page 3 of 3

- DIRECT the setup of a vehicle decon area, IAW NC,EP-EP.ZZ-0308(Q)/EPIP 308S(H), Personnel/Vehicle Survey and Decontamination, if necessary. \_\_\_\_\_
- COORDINATE with the RAC and recommend travel routes, modes of transportation, and appropriate controls in/out of Salem and Hope Creek Stations for all vehicles and personnel. \_\_\_\_\_

1.1.10 PERFORM the following applicable steps upon the declaration of a **GENERAL EMERGENCY**, if thought appropriate:

- A. IMPLEMENT Contamination Controls. \_\_\_\_\_
  - No Eating, Drinking, or Smoking.
  - Setup Step Off Pads (SOP). \_\_\_\_\_
  - Establish Radiological Postings. \_\_\_\_\_
- B. ENSURE habitability is being performed every 30 minutes IAW Attachment 4 of this procedure. \_\_\_\_\_
- C. ENSURE Emergency Ventilation is turned on IAW Attachment 4 of this procedure, if:
  - A radiological release is in progress and the current or forecast meteorological conditions show a radiological plume will enter the Sector that the EOF is located (NNE). \_\_\_\_\_
- D. PLACE SRDs at the front and rear entrances of the Nuclear Training Center, Room 50 (Admin Support Area), and in the EOF proper. Log all SRDs on Form – 1, EOF SRD Log. \_\_\_\_\_

## ATTACHMENT 3

Page 1 of 2

## STATE LIAISON AND RMS TRENDING INSTRUCTIONS

1.0 STATE LIAISON1.1 The State Liaison Should Perform The Following:

- 1.1.1 ESTABLISH communications with the representatives from the States of New Jersey, Delaware, and the NRC, upon their arrival at the EOF. \_\_\_\_\_
- 1.1.2 PROVIDE State personnel 15 minute updates of RMS data when radiological monitors are in warning, alarm, or as thought appropriate. \_\_\_\_\_
- 1.1.3 IF no radiological release is in progress,  
THEN PROVIDE Delaware Emergency Management Agency (DEMA) and New Jersey Bureau of Nuclear Engineering (NJ – BNE) EOF personnel 30 minute updates of radiological plant vent effluent and meteorological data using Form – 4, MIDAS Data Form. \_\_\_\_\_ |  
(This data can be obtained from the EOF dose assessors)
- 1.1.4 IF a radiological release is in progress,  
THEN PROVIDE DEMA and NJ - BNE EOF personnel 15 minute updates of radiological plant vent effluent and meteorological data using Form – 4, MIDAS Data Form. \_\_\_\_\_ |  
(This data can be obtained from the EOF dose assessors)
- 1.1.5 REFER State and Federal personnel to the RMS Status Board for current and trended RMS data. \_\_\_\_\_
- 1.1.6 REFER State and Federal personnel to appropriate contacts in the EOF, when applicable. \_\_\_\_\_

2.0 RMS AND MET TRENDING2.1 Perform The Following To Trend RMS And MET Data:

## 2.1.1 OBTAIN radiological data from the following sources:

- (HOPE CREEK ONLY) VAX LA120 (Refer to Attachment 6, Operation of VAX LA120 Terminal). \_\_\_\_\_
- (SALEM UNITS 1 & 2 ONLY) SPDS Radiation Monitoring Screens (Refer to NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions). \_\_\_\_\_

## ATTACHMENT 3

## Page 2 of 2

- Control Room FAX from a Radiation Protection Technician. \_\_\_\_\_
- A. **INFORM the RSM immediately, INCLUDING INTERRUPTING MEETINGS**, and then the State Liaison, if any of the High Range Containment or Effluent Monitors indicate the following values. \_\_\_\_\_
- (HOPE CREEK ONLY)**
  - DAPA "A" or DAPA "B" =  $\geq 5000$  R/hr.(indication fuel clad barrier has been lost) \_\_\_\_\_
  - NPV, SPV, FRVS, or HTV =  $\geq 1.20E+04$  uCi/sec. (NG TS limits) \_\_\_\_\_
- (SALEM UNITS 1 & 2 ONLY)**
  - R44 "A" or R44 "B" =  $> 300$  R/hr. (indication fuel clad and RCS barriers have been lost) \_\_\_\_\_
  - R41 "D" =  $2.42E+05$  uCi/sec. (NG TS limits) \_\_\_\_\_
- 2.1.2 OBTAIN MET data from one of the following sources:
  - A. VAX LA120 \_\_\_\_\_
  - B. Salem or Hope Creek TSC \_\_\_\_\_
  - C. Salem or Hope Creek Control Room \_\_\_\_\_
  - D. National Weather Service (609-261-6604) or 609-261-6602) \_\_\_\_\_
- 2.1.3 ENSURE the RMS data is being recorded and updated on the RMS Status Board approximately every 15 minutes, or as instructed by the RSM. \_\_\_\_\_
- 2.1.4 INFORM the RSM if current meteorological data is within three degrees of another sector, if a PAR has been or is being made. \_\_\_\_\_
- 2.1.5 REFER to Attachment 5, RMS Quick Reference, for information on Effluent and Area Radiation Monitors at Hope Creek and Salem. \_\_\_\_\_
- 2.1.6 REFER to the Salem RMS Manual and Hope Creek Procedure HC.RP-AR.SP-0001(Q), Radiation Monitoring System Alarm Response, for more detailed RMS information. \_\_\_\_\_

## ATTACHMENT 4

Page 1 of 3

HABITABILITY, EOF EMERGENCY VENTILATION AND MAPLEWOOD LAB  
INSTRUCTIONS1.0 HABITABILITY1.1 Habitability Should Be Performed In The Following Manner:

- 1.1.1 PERFORM EOF Habitability every 30 minutes, if a GENERAL EMERGENCY is declared. \_\_\_\_\_
- 1.1.2 LOG results on Form 3, EOF Habitability Log. \_\_\_\_\_
- 1.1.3 REFER to the following steps for appropriate actions to be taken:
- External dose equivalent (EDE) dose rates are  $> 500$  mR/hr. within the facility, immediate evacuation should be considered. \_\_\_\_\_
  - EDE dose rates are  $> 250$  mR/hr. within the facility, evacuation within (1) hour should be considered. \_\_\_\_\_
  - The EDE dose rates are  $\geq 50$  mR/hr., but  $\leq 250$  mR/hr. within the facility, evacuation within (2) hours should be considered. \_\_\_\_\_
- 1.1.4 PERFORM a survey of areas inside and outside the Nuclear Training Center, as thought appropriate by the RSM, and log on Form – 3, EOF Habitability Log. \_\_\_\_\_
- 1.1.5 SETUP the AIR Monitoring Sampler and set background to 2 times current background. \_\_\_\_\_

2.0 EOF Emergency Ventilation2.1 Place the EOF Ventilation In Service By:

- 2.1.1 ENTER the Mechanical Room (Room 46). \_\_\_\_\_
- 2.1.2 LOCATE the EOF Bypass Switch #1 on the right hand wall. \_\_\_\_\_



**ATTACHMENT 4****Page 2 of 3**

2.1.3 POSITION the Bypass Switch to the "ON" position. \_\_\_\_\_

2.1.4 LOCATE the DP Gauge next to the Lead's Conference Room. \_\_\_\_\_

2.1.5 PRINT the DP Gauge value on the indicated line below. \_\_\_\_\_

\_\_\_\_\_ (W.C.)

(DP GAUGE VALUE)

2.1.6 NOTIFY the RSM if the value indicates < 0.025 inches. \_\_\_\_\_

### 3.0 EOF VENTILATION MAINTENANCE

#### 3.1 Perform The Following Maintenance On The EOF Ventilation:

3.1.1 IF the following conditions exist, THEN perform the following maintenance/ALARA tasks on the EOF Emergency Ventilation HEPA Units.

- If the EOF is in the plume path, ensure the HEPA is dose rated every hour after it is started. \_\_\_\_\_
- If the contact dose rate is  $\geq 500$  mR/hr., ensure that consideration is given to changing out the HEPA units. \_\_\_\_\_

#### NOTE

Contact the Radiation Protection Supervisor – Offsite, for additional technical support (people, advice concerning handling, storage, etc.) in changing out the HEPA filters, if necessary.

3.1.2 IF any of the following occurs, THEN ensure the HEPA units are changed out IAW NC.EP-EP.ZZ-1016(Z)/EPIP 1016, Test Procedures for Backup Generator Vent System and HVAC Filter Replacement.

- Dose rates are > 1000 mR/hr. on contact of the HEPA units. \_\_\_\_\_
- At a high DP. \_\_\_\_\_
- At the RSM's discretion. \_\_\_\_\_

## ATTACHMENT 4

Page 3 of 3

4.0 MAPLEWOOD LABS**NOTE**

Maplewood Labs phone number may be obtained from Admin. Support.

4.1 Contact Maplewood Research and Testing Lab If:

- A radioactive release is thought to be likely. \_\_\_\_\_
- A radioactive release is in progress. \_\_\_\_\_

4.2 Request Personnel From Maplewood Labs To Perform The Following

4.2.1 ASSEMBLE emergency environmental sampling personnel. \_\_\_\_\_

4.2.2 CONSIDER the change out of air samples and TLDs in the downwind sector from the radioactive plume and two sectors to each side. \_\_\_\_\_

4.2.3 REQUEST the coordinator from Maplewood Labs to come to the EOF, if environmental sampling is going to occur. \_\_\_\_\_

## ATTACHMENT 5

Page 1 of 4

## RMS QUICK REFERENCE

**1.0 Salem RMS (Unit 1 and 2)**

**R2** is an Area Radiation Monitor (ARM) located in Containment on the 130' elevation.  
Ranges: 1E-01 to 1E+04 mR/hr.

**R7** is an ARM located in Containment on the 100' elevation, adjacent to the Seal Table Room.  
Ranges: 1E-01 to 1E+04 mR/hr.

**R10A** is an ARM located in Containment on the 100' elevation next to the personnel airlock.  
Ranges: 1E-01 to 1E+04 mR/hr.

**R10B** is an (ARM) located in Containment on the 130' elevation next to the personnel airlock.  
Ranges: 1E-01 to 1E+04 mR/hr.

**R16** Plant Vent Stack is located in the Plant Vent duct at 194' elevation and monitors what is going out the Plant Vent stack.  
Ranges: 1E+01 to 1E+06 CPM

**R34** is an ARM located in the Mechanical Penetration across from the 100' elevation Containment personnel Airlock.  
Ranges: 1E-01 to 1E+06 mR/hr.

**R44A** is a High Range or Accident Area Radiation Monitor (HARM) located in Containment on the 130' elevation close to the personnel airlock.  
Ranges: 1E+00 to 1E+07 R/hr.

**R44B** is a (HARM) located in Containment on the 100' elevation between the R10A and R7 ARMs.  
Ranges: 1E+00 to 1E+07 R/hr.

**R47** is an ARM located in the 78' Electrical Penetration. The PASS lines are located in the overhead. The skid and PASS lines may be the source of any increase in this area. This Penetration has its own ventilation flow path and will vent directly into the atmosphere. There is a potential for an unmonitored release from this Penetration.  
Ranges: 1E-01 to 1E+07 mR/hr

## ATTACHMENT 5

Page 2 of 4

**NOTE**

- All emergency Grab Samples (Noble Gas, Iodine and Particulate) should be taken from the R45 Skid located in the R45 Shed.
- Only one of the following Effluent Monitors (R41A, R41B, R41C, R45B or R45C) readings should be used in MIDAS Manual Mode.

**R41A** is the Low Range Noble Gas Monitor and is located on the R41 Sample Skid on the 122' elevation of the Auxiliary Building next to the door to the stairs.

Ranges: 1E-07 to 1E-01 uCi/cc

**R41B** is the Mid Range Noble Gas Monitor and is located on the R41 Sample Skid on the 122' elevation of the Auxiliary Building next to the door to the stairs.

Ranges: 1E-04 to 1E-02 uCi/cc

**R41C** is the High Range Noble Gas Monitor and is located on the R41 Sample Skid on the 122' elevation of the Auxiliary Building next to the door to the stairs.

Ranges: 1E-01 to 1E+05 uCi/cc

**R41D** is the Effluent Noble Gas Monitor and is located on the R41 Sample Skid on the 122' elevation of the Auxiliary Building next to the door to the stairs.

Ranges: 0E+00 to 1E+13 uCi/Sec

(The R41D should not be used in MIDAS to perform manual dose assessment calculations)

**R45B** is the "Backup" Mid Range Noble Gas Monitor and is located in the R45 Shed behind the Fuel Handling Building. This monitor should not be used unless the R41 monitors are inoperable.

Ranges: 1E-03 uCi/cc to 1E+01 uCi/cc

**R45C** is the "Backup" High Range Noble Gas Monitors and is located in the R45 Shed behind the Fuel Handling Building. This monitor should not be used unless the R41 monitors are inoperable.

Ranges: 1E-01 uCi/cc to 1E+05 uCi/cc

## ATTACHMENT 5

Page 3 of 4

2.0 Hope CreekNOTE

All ARM's in the Reactor Building have maximum ranges of  $1.00\text{E}+04$  mR/hr, except for the Inner Tip Room Monitor (9RX699). The Inner Tip Room Monitor's maximum range is  $1.00\text{E}+07$  mR/hr.

**DAPA A and DAPA B (9RX635 and 9RX636)** are high range ARMs in the Drywell. DAPA A is approximately twice as high as DAPA B under normal operating conditions. During a LOCA in the Drywell the two monitors should start to trend closer together due to the atmospheric conditions in the Drywell affecting both monitors equally. Increases on both of these monitors while DAPA A's reading stays about twice of what DAPA B is reading, would be an indication of fuel damage.  
Ranges:  $1.00\text{E}+00$  to  $1.00\text{E}+08$  R/hr.

**Tip Room Inner ARM (9RX699)** is located on 102' elevation of the Reactor Building inside the Tip Room. This monitor has the highest range of any ARM in the Reactor Building and could give an idea of what the dose rates in the Reactor Building are after the other ARMs peg out high.  
Ranges:  $1.00\text{E}+00$  to  $1.00\text{E}+07$  mR/hr

**Main Steam Line A - D monitors (9RX509-512)** are four ARMs located in the ceiling of the Main Steam Tunnel. Increases in these monitors would be an indication of fuel damage. These monitors could increase due to shine from the Reactor Building, after a radiological release.  
Ranges:  $1.00\text{E}+00$  to  $1.00\text{E}+06$  mR/hr

**Safeguard Instrument Room Monitor (9RX704)** is an ARM located on 77' elevation of the Reactor Building. An increase on this monitor when the reactor SCRAMs with fuel damage could be due to shine from the Torus.  
Ranges:  $1.00\text{E}-01$  to  $1.00\text{E}+04$  mR/hr

## ATTACHMENT 5

## Page 4 of 4

**FRVS Effluent monitor (9RX680)** monitors what is going out the FRVS Plant Vent. Under normal operating conditions Reactor Building ventilation would vent through the South Plant Vent. Under accident conditions or when manually initiated, Reactor Building Ventilation isolates and the Reactor Building will vent through the FRVS. FRVS is always a ground release. Values  $\geq 1.20\text{E}+04$  uCi/Sec would be an indication that a radiological release is in progress.

Ranges:  $1.00\text{E}+00$  to  $1.00\text{E}+12$  uCi/Sec

**North Plant Vent Effluent (NPV) monitor (9RX590)** monitors Offgas and the chemistry lab fume hoods. NPV could be a ground or elevated release depending on the time of year and wind speed. Values  $\geq 1.20\text{E}+04$  uCi/Sec would be an indication that a radiological release is in progress.

Ranges:  $1.00\text{E}+00$  to  $1.00\text{E}+12$  uCi/Sec

**South Plant Vent Effluent (SPV) monitor (9RX580)** monitors Service Radwaste Building, Turbine Building and the Reactor Building (if FRVS hasn't been initiated). Values  $\geq 1.20\text{E}+04$  uCi/Sec would be an indication that a radiological release is in progress.

Ranges:  $1.00\text{E}+00$  to  $1.00\text{E}+12$  uCi/Sec

**Hardened Torus Vent Effluent (HTV) monitor (9RX518)** would be used to vent the Drywell to relieve pressure. The path it would take would be through the Torus and take advantage of the scrubbing properties of the Torus water, but the release would be considered to be an unfiltered release. Iodines and particulates could be a major concern. Control Room operators would have to open a valve to use this release path. Sampling from the PASS Torus Gas Space should be performed to provide information as to what is being released. Values  $\geq 1.20\text{E}+04$  uCi/Sec would be an indication that a radiological release is in progress.

Ranges:  $0.00\text{E}+00$  to  $2.09\text{E}+12$  uCi/Sec

## ATTACHMENT 6

Page 1 of 3

## OPERATION OF THE VAX LA120 TERMINAL

1.0 Meteorological Data1.1 Perform The Following to Obtain Current 15 Minute Average Meteorological Data:

1.1.1 DEPRESS the RETURN key. (USERNAME should be displayed). \_\_\_\_\_

1.1.2 ENTER MET and depress the RETURN key \_\_\_\_\_

**NOTE**

The most current meteorological data should be printed out followed by the Main Meteorological Menu. If no other keys are depressed, the current 15 minute average data will be printed out every 15 minutes.

Meteorological data may be obtained from the Salem SPDS IAW NC.EP-DG.ZZ-0009(Z)

- ENTER Option 3 (Disable Automatic Display of MET Data Every 15 minutes) and depress the RETURN key to STOP the VAX LA120 from printing out meteorological data every 15 minutes. \_\_\_\_\_
- ENTER Option 1 (Display Current Meteorological Data) and depress the RETURN key to receive the current 15 meteorological data print out and assume having the current 15 minute MET data printout automatically. \_\_\_\_\_

1.2 Perform The Following Steps to Obtain Archived Meteorological Data:

1.2.1 DEPRESS the RETURN key. (USERNAME should be displayed) \_\_\_\_\_

1.2.2 ENTER MET and depress the RETURN key. ((The most current meteorological data should be printed out followed by the Main Meteorological Menu). \_\_\_\_\_

1.2.3 ENTER Option 2 (Display Meteorological Data From Data Base) and depress the RETURN key. (Current system Date and Time will be displayed). \_\_\_\_\_

1.2.4 IF this is the data you want, THEN depress the RETURN key. (Your option will be printed out). \_\_\_\_\_

## ATTACHMENT 6

## Page 2 of 3

- 1.2.5 IF you want data from another date and time, THEN go to Step 1.2.6. \_\_\_\_\_
- 1.2.6 ENTER start date and time as shown below and depress the RETURN key. (For December 27, 1989 at 0130 enter 27-DEC-1989 "depress the space bar once" and enter 01:30). \_\_\_\_\_
- 1.2.7 ENTER "Y" if the information is correct or "N" if the information is not correct and reenter it as shown in Step 1.2.6. \_\_\_\_\_
- 1.2.8 ENTER the end date and time as shown below and depress the RETURN key. (For December 28, 1989 at 0230 enter 28-DEC-1989 "depress the space bar once" and enter 02:30). \_\_\_\_\_
- 1.2.9 ENTER "Y" if the information is correct or "N" if the information is not correct and re-enter it as shown in Step 1.2.6. \_\_\_\_\_

2.0 **RMS AND MET DATA (FOR HOPE CREEK ONLY)**2.1 **Perform The Following Steps to Obtain Current Instantaneous RMS and MET Data:**

- 2.1.1 DEPRESS the RETURN key. (USERNAME should be displayed). \_\_\_\_\_
- 2.1.2 ENTER the letters EOF and depress the RETURN key. (A prompt should be displayed asking for PASSWORD). \_\_\_\_\_
- 2.1.3 ENTER EOFUSER and depress the RETURN key. (The EOF Plant Menu should be displayed.) \_\_\_\_\_
- 2.1.4 SELECT Option 1 for Hope Creek. \_\_\_\_\_
- 2.1.5 DEPRESS the RETURN key. (The EOF Report Options Menu will be displayed). \_\_\_\_\_
- 2.1.6 ENTER Option 1 (Current RMS Status) and depress the RETURN key. (The most current instantaneous RMS and 15 minute MET data will be printed out.) \_\_\_\_\_

2.2 **Perform The Following Steps to Obtain 15 Minute Average RMS Data:**

- 2.2.1 DEPRESS the RETURN key. (USERNAME should be displayed). \_\_\_\_\_
- 2.2.2 ENTER EOF and depress the RETURN key. (A prompt should be displayed asking for PASSWORD). \_\_\_\_\_



## ATTACHMENT 6

## Page 3 of 3

- 2.2.3 ENTER EOFUSER and depress the RETURN key. (The EOF Plant Menu should be displayed). \_\_\_\_\_
- 2.2.4 SELECT option 1 for Hope Creek. \_\_\_\_\_
- 2.2.5 DEPRESS the RETURN key. (The EOF Report Options Menu should be displayed). \_\_\_\_\_
- 2.2.6 SELECT and enter option number 6 (15 Minute Historical Data). (Current system date and time should be displayed. A prompt should be displayed for start date and time) \_\_\_\_\_
- 2.2.7 IF this is the data you want, THEN depress the RETURN key. (Your option will be printed out). \_\_\_\_\_
- 2.2.8 IF you want data from another date and time, THEN go to Step 2.2.9. DEPRESS the RETURN key for 15 minute average RMS and MET data. (Your selection will be printed). \_\_\_\_\_
- 2.2.9 ENTER start date and time as shown below and depress the RETURN key. (For December 27, 1989 at 0130 enter 27-DEC-1989 "depress the space bar once" and enter 01:30). \_\_\_\_\_
- 2.2.10 ENTER "Y" if the information is correct or "N" if the information is not correct and reenter it as shown in Step 2.2.9. \_\_\_\_\_
- 2.2.11 ENTER the end date and time as shown below and depress the RETURN key. (For December 28, 1989 at 0230 enter 28-DEC-1989 "depress the space bar once" and enter 02:30). \_\_\_\_\_
- 2.2.12 ENTER "Y" if the information is correct or "N" if the information is not correct and re-enter it as shown in Step 2.2.9. \_\_\_\_\_

## FORM – 1

Page 1 of 1

## EOF DOSIMETRY LOG

NAME	SRD NUMBER	SOCIAL SECURITY NUMBER	ISSUED DATE	RTN DATE	INITIAL VALUE (mRem)	END VALUE (mRem)	TOTAL DOSE (mRem)

FORM – 2

Page 1 of 1

TLD ISSUE LOG

Name\_\_\_\_\_

Date\_\_\_\_\_

TLD Number\_\_\_\_\_ Badge Number\_\_\_\_\_

To the best of my knowledge, my current annual exposure is \_\_\_\_\_mrem.

Signature\_\_\_\_\_

Date\_\_\_\_\_

\*\*\*\*\*  
\*\*\*\*\*

Name\_\_\_\_\_

Date\_\_\_\_\_

TLD Number\_\_\_\_\_ Badge Number\_\_\_\_\_

To the best of my knowledge, my current annual exposure is \_\_\_\_\_mrem.

Signature\_\_\_\_\_

Date\_\_\_\_\_

\*\*\*\*\*  
\*\*\*\*\*

Name\_\_\_\_\_

Date\_\_\_\_\_

TLD Number\_\_\_\_\_ Badge Number\_\_\_\_\_

To the best of my knowledge, my current annual exposure is \_\_\_\_\_mrem.

Signature\_\_\_\_\_

Date\_\_\_\_\_

## FORM – 3

Page 1 of 1

## EOF HABITABILITY LOG

DATE:

LOCATION	TIME	DOSE RATE (mR/hr)	CONTAMINATION (CPM)	INITIALS

FORM - 4

Page 1 of 1

**MIDAS DATA FORM****SALEM UNIT 1 / 2 RELEASE CONCENTRATION AND PLANT VENT FLOW RATE**  
(CIRCLE ONE)

TIME	Monitor R41A (uCi/cc)	Monitor R41B (uCi/cc)	Monitor R41C (uCi/cc)	Monitor OTHER (uCi/cc)	PLANT VENT FLOW RATE (cfm)

**HOPE CREEK RELEASE CONCENTRATION AND PLANT VENT FLOW RATE**

TIME	MONITOR FRVS (uCi/cc)	MONITOR SPV (uCi/cc)	MONITOR NPV (uCi/cc)	MONITOR OTHER (uCi/cc)	FRVS VENT FLOW RATE (cfm)	NPV VENT FLOW RATE (cfm)	SPV VENT FLOW RATE (cfm)	OTHER VENT FLOW RATE (cfm)

**METEOROLOGICAL DATA**

TIME	WIND SPEED 33 FOOT (mph)	WIND SPEED 300 FOOT (mph)	WIND DIR. 33 FOOT - FROM - (degrees)	WIND DIR. 300 FOOT - FROM - (degrees)	300 - 33 STABILITY CLASS (degree C)	AMBIENT TEMPERATURE (degrees C)	RAIN (inches)

**PSEG NUCLEAR LLC**

NC.EP-EP.ZZ-0602 (Q) - REV. 02

EOF RADIOLOGICAL DOSE ASSESSMENT

**PSE&G  
CONTROL**

**COPY #** EP1P059

**USE CATEGORY: II**

---

**REVISION SUMMARY:**


1. Deleted Attachment 2, Instructions For Salem SPDS Displays. It was replaced with NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.
2. Deleted Form – 1 SPDS RMS Log. The information from this log is contained in NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.
3. Revised the reference 5.1.5, forth bullet, from Attachment 2 to NC.EP-DG.ZZ-0009(Z).
4. Revised the reference 5.1.6, forth bullet, from Attachment 2 to NC.EP-DG.ZZ-0009(Z).
5. Added cross references NC.EP-EP.ZZ-0313(Q), Advanced Dose Assessment (MIDAS) Instructions, and NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.
6. This revision satisfies the requirement for a biennial review.

**IMPLEMENTATION REQUIREMENTS**

Implementation date: 10/4/02

---

APPROVED: \_\_\_\_\_

  
Emergency Preparedness Manager

9/18/02  
Date

---

APPROVED: \_\_\_\_\_

N/A  
Vice President – Operations

N/A  
Date

---

**EOF RADIOLOGICAL DOSE ASSESSMENT****TABLE OF CONTENTS**

<b><u>Section</u></b>	<b><u>Title</u></b>	<b><u>Page</u></b>
1.0	PURPOSE	2
2.0	PREREQUISITES .....	2
3.0	PRECAUTIONS AND LIMITATIONS .....	2
4.0	EQUIPMENT REQUIRED .....	2
5.0	PROCEDURE .....	2
5.1	Radiological Assessment Duties .....	2
6.0	RECORDS .....	6
7.0	REFERENCES.....	6
7.1	REFERENCES .....	6
7.2	CROSS REFERENCES .....	6
<b>ATTACHMENTS</b>		
ATTACHMENT 1 - Operation Of The VAX LA120 Terminal .....		7
ATTACHMENT 2- Radiological Based PAR Recommendations And PAR Worksheet.....		14
ATTACHMENT 3- MIDAS Report Guidance .....		16
ATTACHMENT 4- RMS Quick Reference.....		17
ATTACHMENT 5- Iodine Correction Factor .....		21

## 1.0 PURPOSE

Provide direction to EOF Radiological Dose Assessment staff for proper performance of their duties and responsibilities.

## 2.0 PREREQUISITES

### 2.1 Prerequisites To Be Followed Prior To Implementing This Procedure

2.1.1 Implement this procedure:

- At the discretion of the ERM.
- Upon staffing of the EOF.

2.1.2 Personnel who implement this procedure shall be trained and qualified IAW the Emergency Plan.

## 3.0 PRECAUTIONS AND LIMITATIONS

### 3.1 Precaution and Limitations To Be Followed Prior To Implementing This Procedure

It is recommended that initials be used in the place keeping sign-offs, instead of checkmarks, if more than one person may implement this procedure.

## 4.0 EQUIPMENT REQUIRED

As provided in the EOF.

## 5.0 PROCEDURE

### 5.1 RADIOLOGICAL ASSESSMENT DUTIES

5.1.1 OBTAIN a briefing on current radiological conditions and the emergency status from the Radiological Support Manager (RSM) or RSM designee. The following information should be provided during the briefing.

#### NOTE

A radiological release is in progress when the Noble Gas (NG) Offsite Dose Calculation Manual (ODCM)/Federal Limits are met or exceeded.

Hope Creek ODCM Limits =  $1.20\text{E}+04$  uCi/sec.

Salem NG ODCM Limits =  $2.42\text{E}+05$  uCi/sec.



- A. IS a radiological release in progress? \_\_\_\_\_
- B. IF YES, THEN what magnitude is the radiological release  
\_\_\_\_\_ uCi/Sec and the time it started \_\_\_\_\_? \_\_\_\_\_
- C. HAVE any Protective Action Recommendations (PARs) been  
made or are about to be made? \_\_\_\_\_
- D. IF YES, THEN what PAR(s) were or will be made? \_\_\_\_\_
- E. HAVE any Fission Product Barriers (RCS, Fuel, Containment)  
been breached? \_\_\_\_\_
- F. IF YES, THEN which barriers have been breached? \_\_\_\_\_
- G. WHAT is the Emergency classification and the basis? \_\_\_\_\_

5.1.2 IF a log book is being kept, THEN RECORD any pertinent  
information or data in the EOF Dose Assessment Log Book, as  
time permits. \_\_\_\_\_

**NOTE**

A blank Station Status Checklist (SSCL) may be obtained from ECG Attachment 8.

5.1.3 IF automatic data acquisition is operational, THEN go to Step 5.1.7  
and: \_\_\_\_\_

- A. IMPLEMENT NC.EP-EP.ZZ-0309(Q, Dose Assessment. \_\_\_\_\_
- B. PERFORM dose assessment in automatic mode. \_\_\_\_\_
- C. OBTAIN a SSCL. \_\_\_\_\_

5.1.4 IF automatic data acquisition is NOT operational, THEN: \_\_\_\_\_

- A. IMPLEMENT NC.EP-EP.ZZ-0309(Q). \_\_\_\_\_
- B. PERFORM dose assessment in manual mode. \_\_\_\_\_
- C. OBTAIN a SSCL. \_\_\_\_\_

5.1.5 OBTAIN radiological data to perform manual dose assessment from one of  
the following sources:

- (HOPE CREEK ONLY) VAX LA120, IAW Attachment 1 of this procedure. \_\_\_\_\_
  - (HOPE CREEK ONLY) A Control Point FAX of RMS Status Sheet. \_\_\_\_\_
  - (SALEM 1 & 2 ONLY) A Control Room FAX. of Radiological Assessment Data Sheet. \_\_\_\_\_
  - (SALEM 1 & 2 ONLY) SPDS Radiation Monitoring Screens [Refer to NC.EP-DG.ZZ-0009(Z), SPDS Operating Instructions]. \_\_\_\_\_
- 5.1.6 OBTAIN meteorological data to perform manual dose assessment from one of the following sources: \_\_\_\_\_
- (HOPE CREEK ONLY) VAX LA120, IAW Attachment 1 of this procedure. \_\_\_\_\_
  - (HOPE CREEK ONLY) A Control Point FAX. \_\_\_\_\_
  - (SALEM 1 & 2 ONLY) A Control Room FAX. \_\_\_\_\_
  - (SALEM 1 & 2 ONLY) SPDS Radiation Monitoring Screens [Refer to NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions]. \_\_\_\_\_
  - (HOPE CREEK, SALEM 1 & 2 ) If the meteorological data can NOT be obtained from any other source, call the National Weather Service at 609-261-6604 or 609-261-6602. \_\_\_\_\_
- 5.1.7 IF the SSCL indicates a radiological release is in progress, THEN implement Attachment 2, Radiological Based PAR and PAR Worksheet, to determine if a PAR is necessary. \_\_\_\_\_
- A. IF necessary, THEN determine the PAR. \_\_\_\_\_
  - B. REVIEW the SSCL and PAR with the RSM. \_\_\_\_\_
  - C. INFORM the RSM that the EOF is ready to assume the SSCL/Dose Assessment duties. \_\_\_\_\_
- 5.1.8 IF the SSCL indicates a radiological release is NOT in progress, THEN: \_\_\_\_\_
- A. REVIEW the SSCL with the RSM. \_\_\_\_\_
  - B. INFORM the RSM that the EOF is ready to assume the SSCL/Dose Assessment duties. \_\_\_\_\_

5.1.9 PRODUCE the SSCL every 30 minutes and present it to the RSM under any of the following conditions: \_\_\_\_\_

- IF a radiological release is in progress. \_\_\_\_\_
- IF the EOF is activated. \_\_\_\_\_
- IF asked to do so by the RSM. \_\_\_\_\_

5.1.10 DETERMINE which MIDAS reports to print out and present to the RSM, IAW Attachment 4, MIDAS Report Guidance. \_\_\_\_\_

5.1.11 TRACK and trend the affected Plant's radiological conditions by monitoring the RMS. Refer to Step 5.1.5 for methods to obtain RMS data. \_\_\_\_\_

5.1.12 IF any of the following conditions occur to RMS values, THEN notify the RSM immediately, followed by the State Liaison(s): \_\_\_\_\_

- **(HOPE CREEK ONLY)** SSCL Noble Gas or Noble Gas value on the VAX LA120 for North Plant Vent (NPV), South Plant Vent (SPV), Filtration Recirculation Ventilation System (FRVS), and/or Hardened Torus Vent (HTV)  $\geq 1.20\text{E}+04$  uCi/Sec. \_\_\_\_\_
- **(SALEM 1 & 2 ONLY)** SSCL Noble Gas or Noble Gas value on SPDS  $\geq 2.42\text{E}+05$  uCi/Sec. \_\_\_\_\_

#### NOTE

Refer to the Salem RMS Manuals or HC.RP-AR.SP-0001 (Q) or the Hope Creek Radiation Protection Radiation Monitoring System Alarm Response Procedure, for additional information than what is contained in Attachment 4, RMS Quick Reference for Salem or Hope Creek RMS.

- 5.1.13 REVIEW Attachment 4, RMS Quick Reference, for information concerning effluent, some area radiation monitors (ARM), Containment and Drywell ARMs. \_\_\_\_\_
- 5.1.14 IF a radiological release is in progress, THEN calculate a Noble Gas to Iodine Correction Factor (ICF), IAW Attachment 5, Iodine Correction Factor, when possible. \_\_\_\_\_
- 5.1.15 IF "WHAT IF" dose assessment scenarios are necessary, THEN implement NC.EP-EP.ZZ-0313(Q), Advanced Dose Assessment. \_\_\_\_\_

## 6.0 **RECORDS**

Return completed procedure and any information or data thought to be pertinent by the dose assessor, to the Emergency Preparedness Manager.

## 7.0 **REFERENCES**

### 7.1 References

None

### 7.2 **Cross References**

- 7.2.1 NC.EP-EP.ZZ-0309(Q), Dose Assessment
- 7.2.2 NC.EP-EP.ZZ-0313(Q), Advanced Dose Assessment (MIDAS) Instructions |
- 7.2.3 HC.RP-AR.SP-0001(Q). Salem RMS Manuals
- 7.2.4 NC.EP-EP.ZZ-0601(Q), Radiological Dose Assessment
- 7.2.5 NC.EP-AP.ZZ-1014(Q), Emergency Preparedness Classroom Training Administration
- 7.2.6 PSEG Nuclear Emergency Plan
- 7.2.7 NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions |

## ATTACHMENT 1

Page 1 of 3

## OPERATION OF THE VAX LA120 TERMINAL

1.0 Meteorological Data1.1 Perform The Following to Obtain Current 15 Minute Average Meteorological Data:

1.1.1 DEPRESS the RETURN key. (USERNAME should be displayed). \_\_\_\_\_

1.1.2 ENTER MET and depress the RETURN key \_\_\_\_\_

**NOTE**

The most current meteorological data should be printed out followed by the Main Meteorological Menu. If no other keys are depressed, the current 15 minute average data will be printed out every 15 minutes.

Meteorological data may be obtained from the Salem SPDS IAW NC.EP-DG.ZZ-0009(Z).

- ENTER Option 3 (Disable Automatic Display of MET Data Every 15 minutes) and depress the RETURN key to STOP the VAX LA120 from printing out meteorological data every 15 minutes. \_\_\_\_\_
- ENTER Option 1 (Display Current Meteorological Data) and depress the RETURN key to receive the current 15 meteorological data print out and assume having the current 15 minute MET data printout automatically. \_\_\_\_\_

1.2 Perform The Following Steps to Obtain Archived Meteorological Data:

1.2.1 DEPRESS the RETURN key. (USERNAME should be displayed) \_\_\_\_\_

1.2.2 ENTER MET and depress the RETURN key. (The most current meteorological data should be printed out followed by the Main Meteorological Menu). \_\_\_\_\_

1.2.3 ENTER Option 2 (Display Meteorological Data From Data Base) and depress the RETURN key. (Current system Date and Time will be displayed). \_\_\_\_\_

1.2.4 IF this is the data you want, THEN depress the RETURN key. (Your option will be printed out). \_\_\_\_\_

## ATTACHMENT 1

## Page 2 of 3

- 1.2.5 IF you want data from another date and time, THEN go to Step 1.2.6. \_\_\_\_\_
- 1.2.6 ENTER start date and time as shown below and depress the RETURN key. (For December 27, 1989 at 0130 enter 27-DEC-1989 "depress the space bar once" and enter 01:30). \_\_\_\_\_
- 1.2.7 ENTER "Y" if the information is correct or "N" if the information is not correct and reenter it as shown in Step 1.2.6. \_\_\_\_\_
- 1.2.8 ENTER the end date and time as shown below and depress the RETURN key. (For December 28, 1989 at 0230 enter 28-DEC-1989 "depress the space bar once" and enter 02:30). \_\_\_\_\_
- 1.2.9 ENTER "Y" if the information is correct or "N" if the information is not correct and re-enter it as shown in Step 1.2.6. \_\_\_\_\_

**2.0 RMS AND MET DATA (FOR HOPE CREEK ONLY)****2.1 Perform The Following Steps to Obtain Current Instantaneous RMS and MET Data:**

- 2.1.1 DEPRESS the RETURN key. (USERNAME should be displayed). \_\_\_\_\_
- 2.1.2 ENTER the letters EOF and depress the RETURN key. (A prompt should be displayed asking for PASSWORD). \_\_\_\_\_
- 2.1.3 ENTER EOFUSER and depress the RETURN key. (The EOF Plant Menu should be displayed.) \_\_\_\_\_
- 2.1.4 SELECT Option 1 for Hope Creek. \_\_\_\_\_
- 2.1.5 DEPRESS the RETURN key. (The EOF Report Options Menu will be displayed). \_\_\_\_\_
- 2.1.6 ENTER Option 1 (Current RMS Status) and depress the RETURN key. (The most current instantaneous RMS and 15 minute MET data will be printed out.) \_\_\_\_\_

**2.2 Perform The Following Steps to Obtain 15 Minute Average RMS Data:**

- 2.2.1 DEPRESS the RETURN key. (USERNAME should be displayed). \_\_\_\_\_
- 2.2.2 ENTER EOF and depress the RETURN key. (A prompt should be displayed asking for PASSWORD). \_\_\_\_\_

## ATTACHMENT 1

## Page 3 of 3

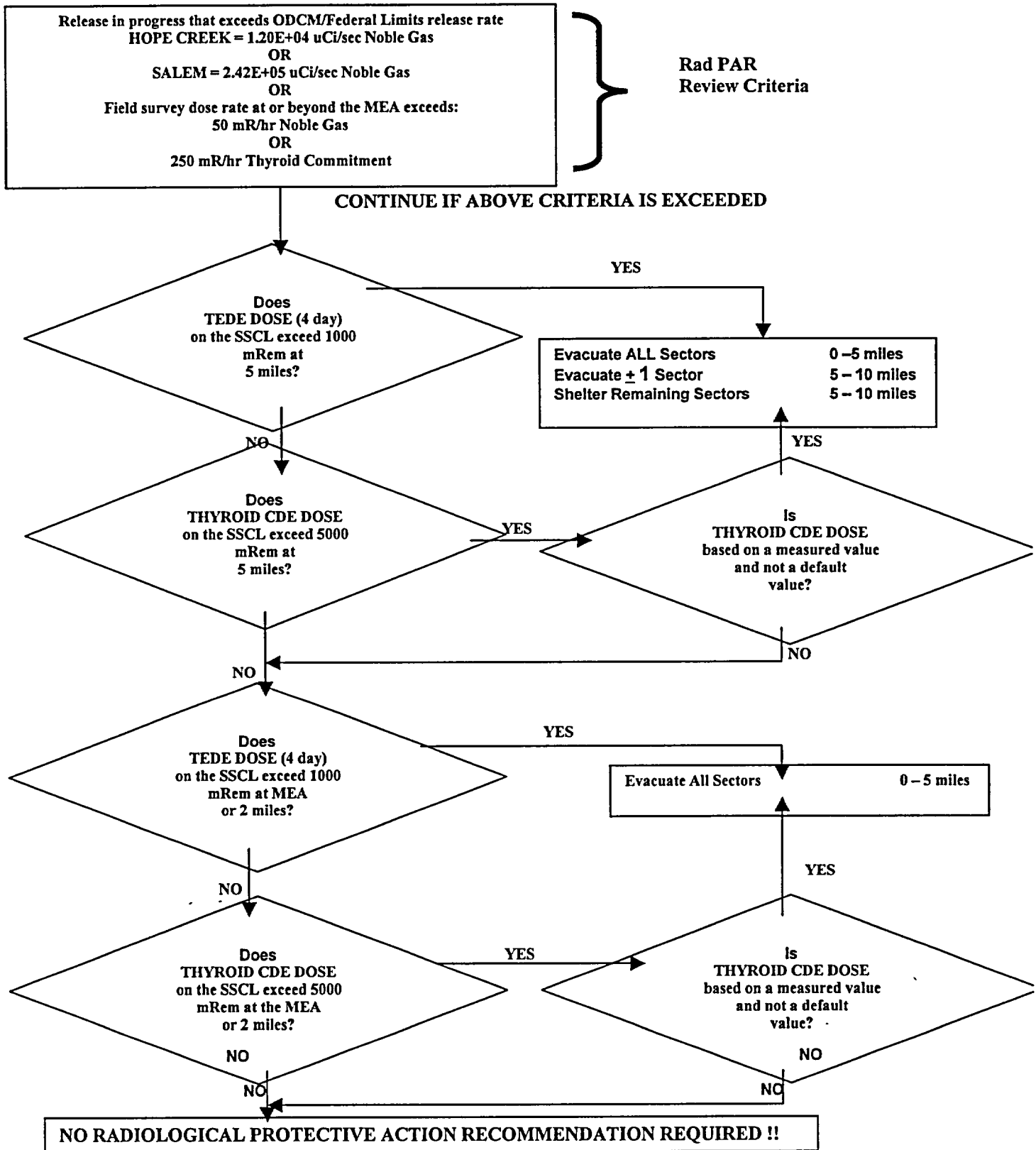
- 2.2.3 ENTER EOFUSER and depress the RETURN key. (The EOF Plant Menu should be displayed). \_\_\_\_\_
- 2.2.4 SELECT option 1 for Hope Creek. \_\_\_\_\_
- 2.2.5 DEPRESS the RETURN key. (The EOF Report Options Menu should be displayed). \_\_\_\_\_
- 2.2.6 SELECT and enter option number 6 (15 Minute Historical Data). (Current system date and time should be displayed. A prompt should be displayed for start date and time) \_\_\_\_\_
- 2.2.7 IF this is the data you want, THEN depress the RETURN key. (Your option will be printed out). \_\_\_\_\_
- 2.2.8 IF you want data from another date and time, THEN go to Step 2.2.9. DEPRESS the RETURN key for 15 minute average RMS and MET data. (Your selection will be printed). \_\_\_\_\_
- 2.2.9 ENTER start date and time as shown below and depress the RETURN key. (For December 27, 1989 at 0130 enter 27-DEC-1989 "depress the space bar once" and enter 01:30). \_\_\_\_\_
- 2.2.10 ENTER "Y" if the information is correct or "N" if the information is not correct and reenter it as shown in Step 1.2.6. \_\_\_\_\_
- 2.2.11 ENTER the end date and time as shown below and depress the RETURN key. (For December 28, 1989 at 0230 enter 28-DEC-1989 "depress the space bar once" and enter 02:30). \_\_\_\_\_
- 2.2.12 ENTER "Y" if the information is correct or "N" if the information is not correct and re-enter it as shown in Step 2.2.9. \_\_\_\_\_

## ATTACHMENT 2

Page 1 OF 2

RADIOLOGICAL BASED PROTECTIVE ACTION RECOMMENDATION FLOW CHART  
AND WORKSHEET

Initial Conditions: If Rad PAR review criteria is not exceeded, Rad PAR is not required.



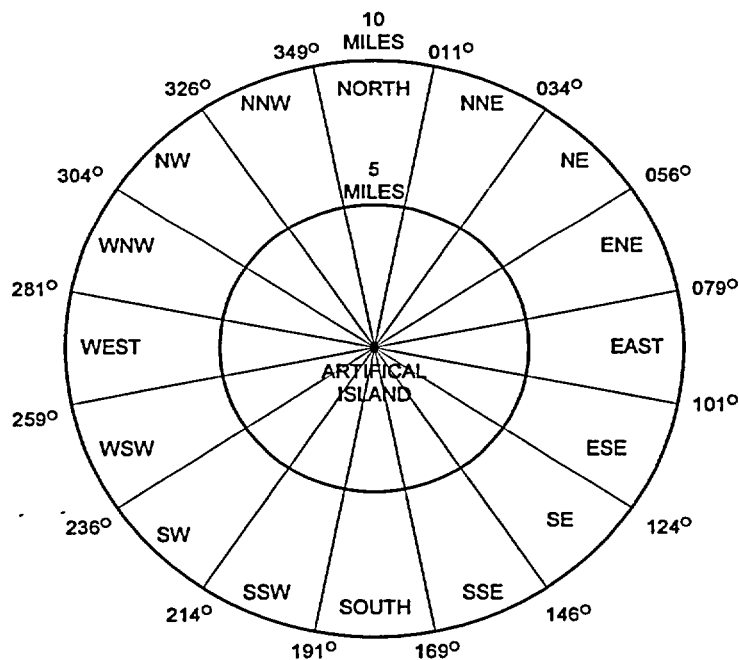


## ATTACHMENT 2

Page 2 of 2

WIND DIRECTION FROM DEGREES	COMPASS		PAR AFFECTED SECTORS DOWNWIND $\pm 1$ SECTORS
349 - 011	N	$\Rightarrow$	SSE - S - SSW
011 - 034	NNE	$\Rightarrow$	S - SSW - SW
034 - 056	NE	$\Rightarrow$	SSW - SW - WSW
056 - 079	ENE	$\Rightarrow$	SW - WSW - W
079 - 101	E	$\Rightarrow$	WSW - W - WNW
101 - 124	ESE	$\Rightarrow$	W - WNW - NW
124 - 146	SE	$\Rightarrow$	WNW - NW - NNW
146 - 169	SSE	$\Rightarrow$	NW - NNW - N
169 - 191	S	$\Rightarrow$	NNW - N - NNE
191 - 214	SSW	$\Rightarrow$	N - NNE - NE
214 - 236	SW	$\Rightarrow$	NNE - NE - ENE
236 - 259	WSW	$\Rightarrow$	NE - ENE - E
259 - 281	W	$\Rightarrow$	ENE - E - ESE
281 - 304	WNW	$\Rightarrow$	E - ESE - SE
304 - 326	NW	$\Rightarrow$	ESE - SE - SSE
326 - 349	NNW	$\Rightarrow$	SE - SSE - S

NOTE: CONSIDER ADDING A SECTOR TO THE PAR IF THE WIND DIRECTION (FROM) IS WITHIN  $\pm 3^\circ$  OF A SECTOR DIVIDING LINE.



**ATTACHMENT 3**

Page 1 of 1

**MIDAS REPORT GUIDANCE****NOTE**

This Attachment is to be used only as a guidance. Depending on the RSM's requests, more or less reports may be asked for.

**1.0 NO RADIOLOGICAL RELEASE IN PROGRESS****Print Out The Following Plots**

- TEDE 4-DAY DOSE PLOT \_\_\_\_\_
- As requested by the RSM. \_\_\_\_\_

**2.0 RADIOLOGICAL RELEASE IN PROGRESS****Print Out The Following Plots And Prints.**

- MIDAS TEDE 4-DAY PLOT (FOR LEADS MEETINGS). \_\_\_\_\_
- MIDAS TEDE DOSE RATE PRINT \_\_\_\_\_
- MIDAS THYROID CDE DOSE RATE PRINT \_\_\_\_\_
- MIDAS PROJECTED DOSE SUMMARY PRINT \_\_\_\_\_
- MIDAS MET AND RAD SUMMARY PRINT \_\_\_\_\_

## ATTACHMENT 4

Page 1 of 4

## RMS QUICK REFERENCE

1.0 Salem RMS (Unit 1 and 2)

**R2** is an Area Radiation Monitor (ARM) located in Containment on the 130' elevation.  
Ranges: 1E-01 to 1E+04 mR/hr.

**R7** is an ARM located in Containment on the 100' elevation, adjacent to the Seal Table Room.  
Ranges: 1E-01 to 1E+04 mR/hr.

**R10A** is an ARM located in Containment on the 100' elevation next to the personnel airlock.  
Ranges: 1E-01 to 1E+04 mR/hr.

**R10B** is an (ARM) located in Containment on the 130' elevation next to the personnel airlock.  
Ranges: 1E-01 to 1E+04 mR/hr.

**R16** Plant Vent Stack is located in the Plant Vent duct at 194' elevation and monitors what is going out the Plant Vent stack.  
Ranges: 1E+01 to 1E+06 CPM

**R34** is an ARM located in the Mechanical Penetration across from the 100' elevation Containment personnel Airlock.  
Ranges: 1E-01 to 1E+06 mR/hr.

**R44A** is a High Range or Accident Area Radiation Monitor (HARM) located in Containment on the 130' elevation close to the personnel airlock.  
Ranges: 1E+00 to 1E+07 R/hr.

**R44B** is a (HARM) located in Containment on the 100' elevation between the R10A and R7 ARMs.  
Ranges: 1E+00 to 1E+07 R/hr.

**R47** is an ARM located in the 78' Electrical Penetration. The PASS lines are located in the overhead. The skid and PASS lines may be the source of any increase in this area. This Penetration has its own ventilation flow path and will vent directly into the atmosphere. There is a potential for an unmonitored release from this Penetration.  
Ranges: 1E-01 to 1E+07 mR/hr

## ATTACHMENT 4

Page 2 of 4

**NOTE**

- All emergency Grab Samples (Noble Gas, Iodine and Particulate) should be taken from the R45 Skid located in the R45 Shed.
- Only one of the following Effluent Monitors (R41A, R41B, R41C, R45B or R45C) readings should be used in MIDAS Manual Mode.

**R41A** is the Low Range Noble Gas Monitor and is located on the R41 Sample Skid on the 122' elevation of the Auxiliary Building next to the door to the stairs.

Ranges: 1E-07 to 1E-01 uCi/cc

**R41B** is the Mid Range Noble Gas Monitor and is located on the R41 Sample Skid on the 122' elevation of the Auxiliary Building next to the door to the stairs.

Ranges: 1E-04 to 1E-02 uCi/cc

**R41C** is the High Range Noble Gas Monitor and is located on the R41 Sample Skid on the 122' elevation of the Auxiliary Building next to the door to the stairs.

Ranges: 1E-01 to 1E+05 uCi/cc

**R41D** is the Effluent Noble Gas Monitor and is located on the R41 Sample Skid on the 122' elevation of the Auxiliary Building next to the door to the stairs.

Ranges: 0E+00 to 1E+13 uCi/Sec

(The R41D should not be used in MIDAS to perform manual dose assessment calculations)

**R45B** is the "Backup" Mid Range Noble Gas Monitor and is located in the R45 Shed behind the Fuel Handling Building. This monitor should not be used unless the R41 monitors are inoperable.

Ranges: 1E-03 uCi/cc to 1E+01 uCi/cc

**R45C** is the "Backup" High Range Noble Gas Monitors and is located in the R45 Shed behind the Fuel Handling Building. This monitor should not be used unless the R41 monitors are inoperable.

Ranges: 1E-01 uCi/cc to 1E+05 uCi/cc

## ATTACHMENT 4

Page 3 of 4

2.0 Hope Creek**NOTE**

All ARM's in the Reactor Building have maximum ranges of  $1.00\text{E}+04$  mR/hr, except for the Inner Tip Room Monitor (9RX699). The Inner Tip Room Monitor's maximum range is  $1.00\text{E}+07$  mR/hr.

**DAPA A and DAPA B (9RX635 and 9RX636)** are high range ARMs in the Drywell. DAPA A is approximately twice as high as DAPA B under normal operating conditions. During a LOCA in the Drywell the two monitors should start to trend closer together due to the atmospheric conditions in the Drywell affecting both monitors equally. Increases on both of these monitors while DAPA A's reading stays about twice of what DAPA B is reading, would be an indication of fuel damage.  
Ranges:  $1.00\text{E}+00$  to  $1.00\text{E}+08$  R/hr.

**Tip Room Inner ARM (9RX699)** is located on 102' elevation of the Reactor Building inside the Tip Room. This monitor has the highest range of any ARM in the Reactor Building and could give an idea of what the dose rates in the Reactor Building are after the other ARMs peg out high.  
Ranges:  $1.00\text{E}+00$  to  $1.00\text{E}+07$  mR/hr

**Main Steam Line A - D monitors (9RX509-512)** are four ARMs located in the ceiling of the Main Steam Tunnel. Increases in these monitors would be an indication of fuel damage. These monitors could increase due to shine from the Reactor Building, after a radiological release.  
Ranges:  $1.00\text{E}+00$  to  $1.00\text{E}+06$  mR/hr

**Safeguard Instrument Room Monitor (9RX704)** is an ARM located on 77' elevation of the Reactor Building. An increase on this monitor when the reactor SCRAMs with fuel damage could be due to shine from the Torus.  
Ranges:  $1.00\text{E}-01$  to  $1.00\text{E}+04$  mR/hr

## ATTACHMENT 4

## Page 4 of 4

**FRVS Effluent monitor (9RX680)** monitors what is going out the FRVS Plant Vent. Under normal operating conditions Reactor Building ventilation would vent through the South Plant Vent. Under accident conditions or when manually initiated, Reactor Building Ventilation isolates and the Reactor Building will vent through the FRVS. FRVS is always a ground release. Values  $\geq 1.20\text{E}+04$  uCi/Sec would be an indication that a radiological release is in progress.

Ranges:  $1.00\text{E}+00$  to  $1.00\text{E}+12$  uCi/Sec

**North Plant Vent Effluent (NPV) monitor (9RX590)** monitors Offgas and the chemistry lab fume hoods. NPV could be a ground or elevated release depending on the time of year and wind speed. Values  $\geq 1.20\text{E}+04$  uCi/Sec would be an indication that a radiological release is in progress.

Ranges:  $1.00\text{E}+00$  to  $1.00\text{E}+12$  uCi/Sec

**South Plant Vent Effluent (SPV) monitor (9RX580)** monitors Service Radwaste Building, Turbine Building and the Reactor Building (if FRVS hasn't been initiated). Values  $\geq 1.20\text{E}+04$  uCi/Sec would be an indication that a radiological release is in progress.

Ranges:  $1.00\text{E}+00$  to  $1.00\text{E}+12$  uCi/Sec

**Hardened Torus Vent Effluent (HTV) monitor (9RX518)** would be used to vent the Drywell to relieve pressure. The path it would take would be through the Torus and take advantage of the scrubbing properties of the Torus water, but the release would be considered to be an unfiltered release. Iodines and particulates could be a major concern. Control Room operators would have to open a valve to use this release path. Sampling from the PASS Torus Gas Space should be performed to provide information as to what is being released. Values  $\geq 1.20\text{E}+04$  uCi/Sec would be an indication that a radiological release is in progress.

Ranges:  $0.00\text{E}+00$  to  $2.09\text{E}+12$  uCi/Sec

## ATTACHMENT 5

Page 1 of 3

## IODINE CORRECTION FACTOR

1.0 IODINE CORRECTION FACTOR CALCULATION USING PLANT VENT DATA1.1 Perform The Following To Obtain An Iodine Correction Factor:

1.1.1 OBTAIN the Plant vent Iodine 131 data in uCi/cc from the Radiation Protection Supervisor-Offsite (RPS-Offsite) located in the TSC. \_\_\_\_\_

1.1.2 OBTAIN the Plant Vent RMS Noble Gas value in uCi/cc from the appropriate effluent monitor that the radiological release is being discharged from. \_\_\_\_\_

1.1.3 DIVIDE the Iodine value by the Plant Vent Noble Gas value This will produce the Iodine Correction Factor (ICF) \_\_\_\_\_

$\frac{\text{Iodine 131 (uCi/cc)}}{\text{Plant Vent RMS Noble Gas Value (uCi/cc)}} = \text{ICF}$
--

1.1.4 MULTIPLY most current RMS Noble Gas monitor value by the ICF. The product will be the Corrected Iodine Value. \_\_\_\_\_

1.1.5 OBTAIN the Corrected Iodine Value at least every 30 minutes by multiplying the most current Plant Vent RMS Noble Gas monitor value by the ICF. \_\_\_\_\_

1.1.6 IMPLEMENT NC.EP-EP.ZZ-0309(Q)/EPIP 309S(H), Dose Assessment, Attachment 3, Manual Dose Assessment, and follow appropriate steps. \_\_\_\_\_

1.1.7 INPUT the Corrected Iodine Value into the appropriate RMS – DI location on the MIDAS spread sheet (i.e., FRVS - DI, 2R45B - DI, etc.). \_\_\_\_\_

## ATTACHMENT 5

Page 2 of 3

**NOTE**

Use the current Plant Vent flow rate for the –DI flow rate.

1.1.8 UPDATE the ICF whenever more recent Plant Vent Iodine 131 is available.

2.0 **IODINE CORRECTION FACTOR CALCULATION USING FIELD TEAM DOSE PROJECTION DATA**

**NOTE**

- The following method will only work if the Field Monitoring Team data is collected at the MIDAS projected center line at a distance of 2, 5, or 10 miles.
- The primary methodology of obtaining the ICF should be performed IAW Section 1.0 of this Attachment

2.1 **Perform The Following To Obtain An ICF From Field Monitoring Data:**

2.1.1 RUN an automatic SSCL. Use the Plant Vent Noble Gas RMS monitor value and current 15 minute MET data if in Manual MIDAS mode.

2.1.2 RECORD the Projected Dose Rate of interest (SSCL TEDE DOSE RATE) in Space A., the distance in miles in Space B., and the direction in Space C.

A. \_\_\_\_\_ (mRem/hour TEDE Rate) B. \_\_\_\_\_ (Miles) C. \_\_\_\_\_ (Degrees)



## ATTACHMENT 5

Page 3 of 3

2.1.3 RECORD the Projected X/Q of interest (SSCL X/Q) in Space D. \_\_\_\_\_

D. \_\_\_\_\_

2.1.4 RECORD the Field Team's measured CLOSED WINDOW reading at the location of interest in Space E. \_\_\_\_\_

E. \_\_\_\_\_ mR/hour

2.1.5 RECORD the Field Team Iodine 131 Sample in uCi/cc in Space F. IAW NC.EP-EP.ZZ-0603(Q), Field Monitoring. \_\_\_\_\_

F. \_\_\_\_\_ uCi/cc

2.1.6 CALCULATE the Iodine 131 Release Rate as follows and record in Space G.: \_\_\_\_\_

$$\frac{A}{E} * \frac{1}{D} * F * 1.00E+06 = G. \text{_____ (uCi/Sec)}$$

(1.00E+06 = Conversion Factor from Cubic Meters to cc)

2.1.7 OBTAIN the Noble Gas Release Rate (uCi/Sec) using the same SSCL the TEDE DOSE RATE and X/Q that were obtained from and record in Space H. \_\_\_\_\_

H. \_\_\_\_\_

2.1.8 DETREMININE the Iodine Correction Factor (ICF) as follows: \_\_\_\_\_

$$\frac{\text{Iodine Release Rate in uCi/Sec (Space G.)}}{\text{Noble Gas Release Rate in uCi/Sec (Space H.)}} = \text{ICF}$$

2.1.9 FOLLOW the directions in 1.0, Steps 1.1.4 - 1.1.9 of this Attachment for instructions in the proper use of the ICF. \_\_\_\_\_

PSEG NUCLEAR  
ONSITE IMPLEMENTING PROCEDURES  
October 4, 2002

CHANGE PAGES FOR  
REVISION #26

The Table of Contents forms a general guide to the current revision of each section of the Onsite EPEPs. The changes that are made in this TOC Revision #26 are shown below. Please check that your revision packet is complete and remove the outdated material listed below:

ADD			REMOVE		
Page	Description	Rev.	Page	Description	Rev.
ALL	TOC	26	ALL	TOC	25
All	NC.EP-EP.ZZ-0309	05	All	NC.EP-EP.ZZ-0309	04
All	NC.EP-EP.ZZ-0310	05	All	NC.EP-EP.ZZ-0310	04
All	NC.EP-EP.ZZ-0313	02	All	NC.EP-EP.ZZ-0314	01

PSEG NUCLEAR LLC  
EMERGENCY PLAN ONSITE IMPLEMENTING PROCEDURES  
TABLE OF CONTENTS  
October 4, 2002

PSEG  
CONTROL  
COPY # EPIP059

STATION PROCEDURES

		<u>Revision Number</u>	<u>Number Pages</u>	<u>Effective Date</u>
NC.EP-EP.ZZ-0101(Q)	ACTIONS REQUIRED AT UNAFFECTED STATION	01	15	12/18/2001
NC.EP-EP.ZZ-0102(Q)	EMERGENCY COORDINATOR RESPONSE	04	22	11/09/2001
NC.EP-EP.ZZ-0201(Q)	TSC - INTEGRATED ENGINEERING RESPONSE	05	23	07/31/2002
NC.EP-EP.ZZ-0202(Q)	OPERATIONS SUPPORT CENTER (OSC) ACTIVATION AND OPERATIONS	04	28	03/14/2002
NC.EP-EP.ZZ-0203(Q)	ADMINISTRATIVE SUPPORT/ COMMUNICATION TEAM RESPONSE - TSC	03	15	03/14/2002
EPIP 204H	EMERGENCY RESPONSE CALLOUT/PERSONNEL RECALL	56	27	07/31/2002
EPIP 204S	EMERGENCY RESPONSE CALLOUT/PERSONNEL RECALL	56	25	07/31/2002
HC.EP-EP.ZZ-0205(Q)	TSC - POST ACCIDENT CORE DAMAGE ASSESSMENT	03	39	02/06/2002
SC.EP-EP.ZZ-0205(Q)	TSC - POST ACCIDENT CORE DAMAGE ASSESSMENT	02	82	02/06/2002
HC.EP-EP.ZZ-0301(Q)	SHIFT RADIATION PROTECTION TECHNICIAN RESPONSE	02	21	05/24/2001
SC.EP-EP.ZZ-0301(Q)	SHIFT RADIATION PROTECTION TECHNICIAN RESPONSE	03	35	05/24/2001

PSEG NUCLEAR LLC  
EMERGENCY PLAN ONSITE IMPLEMENTING PROCEDURES  
TABLE OF CONTENTS  
October 4, 2002

		<u>Revision Number</u>	<u>Number Pages</u>	<u>Effective Date</u>
NC.EP-EP.ZZ-0302 (Q)	RADIOLOGICAL ASSESSMENT COORDINATOR RESPONSE	05	19	07/03/2002
NC.EP-EP.ZZ-0303 (Q)	CONTROL POINT - RADIATION PROTECTION RESPONSE	02	25	07/03/2002
NC.EP-EP.ZZ-0304 (Q)	OPERATIONS SUPPORT CENTER (OSC) RADIATION PROTECTION RESPONSE	06	26	07/03/2002
NC.EP-EP.ZZ-0305 (Q)	POTASSIUM IODIDE (KI) ADMINISTRATION	01	10	07/03/2002
NC.EP-EP.ZZ-0306 (Q)	EMERGENCY AIR SAMPLING	00	12	02/29/2000
NC.EP-EP.ZZ-0307 (Q)	PLANT VENT SAMPLING	02	13	07/03/2002
NC.EP-EP.ZZ-0308 (Q)	PERSONNEL/VEHICLE SURVEY AND DECONTAMINATION	00	16	02/29/2000
NC.EP-EP.ZZ-0309 (Q)	DOSE ASSESSMENT (MIDAS) INSTRUCTIONS	05	40	10/04/2002
NC.EP-EP.ZZ-0310 (Q)	RADIATION PROTECTION SUPERVISOR - OFFSITE AND FIELD MONITORING TEAM RESPONSE	05	43	10/04/2002
NC.EP-EP.ZZ-0311 (Q)	CONTROL POINT - CHEMISTRY RESPONSE	02	17	07/03/2002
NC.EP-EP.ZZ-0312 (Q)	CHEMISTRY SUPERVISOR - CP/TSC RESPONSE	03	25	07/03/2002
NC.EP-EP.ZZ-0313 (Q)	ADVANCED DOSE ASSESSMENT (MIDAS) INSTRUCTIONS	02	34	10/04/2002

NC.EP-EP.ZZ-0309 (Q) Rev. 05

## DOSE ASSESSMENT (MIDAS) INSTRUCTIONS

USE CATEGORY: **II**PSE&G  
CONTROLCOPY # EPIP059**REVISION SUMMARY:**

1. This revision satisfies the requirement for a biennial review.
2. Deleted Attachment 2, Operating Instructions For Salem SPDS Radiological Screens. It was replaced with NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.
3. Deleted Form – 1, SPDS RMS Log. It was replaced with NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.
4. Revised the third bullet reference in the Note after 5.0 from Attachment 2, Operating Instructions For Salem SPDS Radiological Screens, to NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.
5. Revised the ninth bullet in step 5.1.8 from Attachment 2, Operating Instructions For Salem SPDS Radiological Screens, to NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.
6. Added cross references NC.EP-EP.ZZ-0313(Q), Advanced Dose Assessment (MIDAS) Instructions, and NC.EP-DG.ZZ-0009(Z) . Salem SPDS Operating Instructions.
7. Added the units to seventh bullet in the note on page 20.
8. Added to the Precaution's section that the user should wait until the SSCL has finished printing out prior to printing any maps or forms and should **NOT** perform any additional operations while printing out a map or form.

**IMPLEMENTATION REQUIREMENTS**Procedure Implementation Date: 10/4/02

APPROVED: \_\_\_\_\_

  
Emergency Preparedness Manager9/19/02  
Date

APPROVED: \_\_\_\_\_

N/A  
Vice President - OperationsN/A  
Date

## TABLE OF CONTENTS

Section	Title	Page
1.0	PURPOSE.....	2
2.0	PREREQUISITES .....	2
2.1	Prerequisites To Be Followed Prior To Implementing This Procedure ..	2
3.0	PRECAUTIONS AND LIMITATIONS .....	2
3.1	Precaution and Limitations To Be Followed Prior To Implementing This Procedure .....	2
4.0	EQUIPMENT REQUIRED .....	3
5.0	PROCEDURE .....	4
5.1	Sign-on Instructions For MIDAS.....	4
5.2	Performance of Dose Assessment When Plant Vent Effluent Monitors Increase by a Factor of Greater Than or Equal to 10 .....	6
5.3	Preplanned Alternative Guidance .....	8
5.4	Common Commands For MIDAS.....	10
5.5	Perform the Following to Produce a SSCL Page 2 Using the Automatic Dose Assessment Mode.....	15
5.6	Perform the Following to Produce a SSCL Page 2 Using the Manual Dose Assessment Mode.....	17
5.7	Perform the Following to Produce a SSCL Page 2 Using Isotopic Dose Assessment Mode .....	24
5.8	Perform the Appropriate Operational Instructions to Manipulate Map Screens and Obtain Printouts of Maps.....	33
6.0	RECORDS .....	37
7.0	REFERENCES.....	37
7.1	References .....	37
7.2	Cross References.....	37
ATTACHMENTS		
	Attachment 1 Operating Instructions For The VAX LA120 Terminal.....	38

**1.0 PURPOSE**

This procedure provides guidance and operating instructions concerning performing basic dose assessment using the dose assessment program MIDAS.

**2.0 PREREQUISITES****2.1 Prerequisites to be Followed Prior to Implementing This Procedure**

Implement this procedure:

- Upon the declaration of an Unusual Event or higher emergency classification.
- At the request of the Operation Superintendent (OS).
- At the request of the Emergency Duty Officer (EDO).
- At the request of the Radiation Protection Duty Supervisor (RPDS) or Shift Radiation Protection Technician (SRPT).
- IAW HC.RP-AR.SP-0001(Q), Radiation Monitoring System Gaseous Monitor Alarm Response.

**3.0 PRECAUTIONS AND LIMITATIONS****3.1 Precautions and Limitations to be Followed Prior to Implementing this Procedure:**

**3.1.1 Sections/Steps in this procedure may be performed in the order deemed appropriate for the emergency situation. Only Sections/Steps that are applicable to the specific MIDAS dose assessment mode of operation that is being performed need to be followed.**

**3.1.2 The user should wait until the SSCL has finished printing out prior to printing any maps or forms and should NOT perform any additional operations while printing out a map or form.**

- 3.1.3 It is recommended that initials be used in the place keeping sign-offs, instead of checkmarks, if more than one person may implement this procedure.
- 3.1.4 This procedure is limited to performance of basic dose assessment calculations (Automatic Mode, Manual Mode, and Isotopic Mode)
- 3.1.5 Personnel who implement this procedure shall be trained and qualified IAW the Emergency Plan.

4.0 **EQUIPMENT REQUIRED**

Necessary equipment is provided in the Emergency Response Facilities.



5.0 **PROCEDURE****NOTE**

- Dose Assessment should be performed using 10 or 15-minute average RMS and Meteorological data, unless circumstances in Section 5.2 are met.
- Attachment 1, Operating Instructions for the VAX LA120 Terminal, should be referred to for directions on operating the VAX LA120.
- NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions, should be referred to for directions concerning operating the SPDS radiological screens.

5.1 **Sign-on Instructions For MIDAS**

- 5.1.1 DEPRESS the **POWER** button. (The Microsoft Windows NT Screen will appear with a Begin Logon box displayed. The command inside the box will read, Press Ctrl + Alt + Delete to logon). \_\_\_\_\_
- 5.1.2 DEPRESS the **Ctrl, Alt, Delete** keys simultaneously. (The Logon Information box will be displayed with lines to enter User name and Password). \_\_\_\_\_
- 5.1.3 INPUT **midas** into the User name line. \_\_\_\_\_
- 5.1.4 INPUT **midas** into the Password line and depress the **RETURN** key. \_\_\_\_\_
- 5.1.5 POSITION the cursor on the **Midas** Icon and click the mouse twice. (The MIDAS unit selection screen will be displayed). \_\_\_\_\_
- 5.1.6 POSITION the mouse cursor + over the box of your selection (**Hope Creek, Salem Unit 1, or Salem Unit 2**) and click the mouse once. (Your selection will become highlighted). \_\_\_\_\_
- 5.1.7 POSITION the cursor over the **CONFIRM** box and click the mouse once. (The Function Selection screen will appear). \_\_\_\_\_

5.1.8 SELECT the appropriate Section for type of dose assessment mode from list below:

- Refer to **Section 5.2** to perform Dose Assessment **When Plant Vent Effluent Monitors Increase By A Factor of > 10.** \_\_\_\_\_
- Refer to **Section 5.3** for guidance concerning **Preplanned Alternate Methods** to perform Dose Assessment. \_\_\_\_\_
- Refer to **Section 5.4** for **Common MIDAS Commands**:
  - **Change Date and/or Time.** \_\_\_\_\_
  - **Exit MIDAS Utilizing CTRL, ALT, DELETE Keys.** \_\_\_\_\_
  - **Print a Screen, Report, Map, or an additional SSCL.** \_\_\_\_\_
- Refer to **Section 5.5** to perform Dose Assessment in **Automatic Mode.** \_\_\_\_\_
- Refer to **Section 5.6** to perform Dose Assessment in **Manual Mode.** \_\_\_\_\_
- Refer to **Section 5.7** to perform Dose Assessment in **Isotopic Mode.** \_\_\_\_\_
- Refer to **Section 5.8** to perform **Manipulate Maps Screens and Print Out a Map.** \_\_\_\_\_
- Refer to **Attachment 1** for **Operating Instructions for the VAX LA120 Terminal.** \_\_\_\_\_
- Refer to **NC.EP-DG.ZZ-0009(Z)**, **SPDS Operating Instructions**, for directions concerning operating the SPDS radiological screens. \_\_\_\_\_

5.2 **Performance of Dose Assessment When Plant Vent Effluent Monitors Increase by a Factor of Greater Than Or Equal to 10:**

**NOTE**

Salem and Hope Creek Plant Vent Effluent Monitors are:

- **SALEM PLANT VENT EFFLUENT MONITORS**
  - ◆ Unit 1 or 2 R41 A, B, C
  - ◆ Unit 1 or 2 R45 B, C
- **HOPE CREEK PLANT VENT EFFLUENT MONITORS**
  - ◆ SPV – 9RX606, 9RX607, 9RX581
  - ◆ NPV – 9RX602, 9RX603, 9RX591
  - ◆ FRVSV – 9RX640, 9RX610, 9RX611
  - ◆ HTV – 9RX516, 9RX517

5.2.1 IF any Plant Vent Effluent Monitor(s) increase by a factor of 10 or more, THEN perform the following:

- A. PERFORM dose assessment calculations in the manual mode using instantaneous value(s) In Accordance With (IAW) Section 5.6 of this procedure.
- B. WRITE on top of the Station Status Checklist Page 2 (SSCL), "RELEASE RATE CALCULATED FROM INSTANTANEOUS MONITOR VALUES."
- C. RECOMMEND radiological PARs using the SSCL, IAW SC.EP-EP.ZZ-0301(Q), HC.EP-EP.ZZ-0301(Q), OR NC.EP-EP.ZZ-0602(Q), as appropriate.
- D. ADVISE the appropriate person (OS, RAC, RSM) that, "The SSCL and radiological PAR (if any) was calculated from instantaneous Plant Vent data and may not reflect actual radiological conditions. An additional SSCL will be forth coming in approximately 20 minutes."

- E.    PERFORM another dose assessment in  
         approximately 15 to 20 minutes using 10 or  
         15-minute average data. \_\_\_\_\_
  
- F.    Provide the SSCL and radiological PAR, if applicable, to the  
         appropriate person (OS, RAC, RSM). \_\_\_\_\_

### 5.3 Preplanned Alternative Guidance

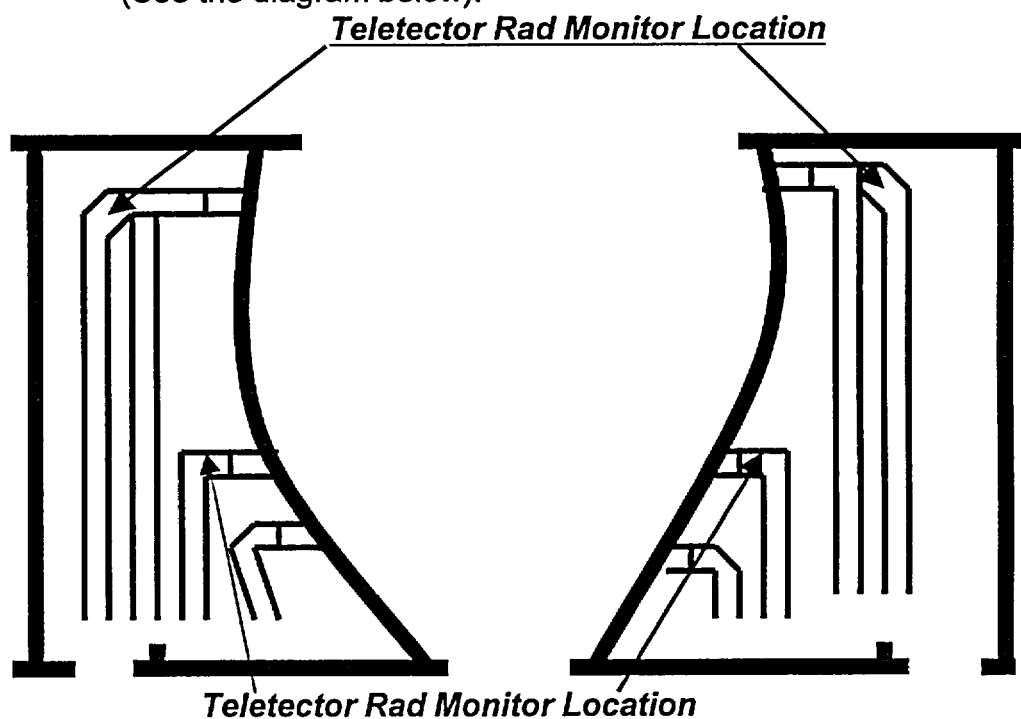
#### NOTE

##### SALEM UNIT 1/2 ONLY

Contact the OS prior to performing dose assessment calculations for preplanned alternative, if the 1R41 or 2R41 monitor(s) are out of service/inoperational and are needed to perform dose assessment calculations.

5.3.1 PERFORM the appropriate steps listed below, to calculate a SSCL, when the normal method to perform dose assessment at SALEM UNIT 1 and/or SALEM UNIT 2 is **NOT** possible:

- A. IMPLEMENT Section 5.6, to perform dose assessment calculations using Main Steam Line (MSL) Teletector Readings. All contact teletector readings on the MSLs should be obtained on the curve of the line prior to the MSIV. (See the diagram below).



MAIN STEAM LINES 12, 14, 22, 24 ARE FOUND IN THE OUTSIDE PIPING PENETRATIONS.

MAIN STEAM LINES 11, 13, 21, 23 ARE ACCESSIBLE BY WAY OF THE CHILLER ROOMS AND ARE LOCATED IN THE INNER PIPE PENETRATIONS.

B. IMPLEMENT Section 5.6, to perform dose assessment calculations based on the R45 monitor values. \_\_\_\_\_

C. PERFORM steps 1 and 2 for Salem Unit 1/2 to calculate a value using the R16 monitor that can be used by MIDAS to perform dose assessment calculations, if the 1/2 R41A monitor is not operational. \_\_\_\_\_

- 1 DIVIDE the R16 value by  $3.55\text{E}+07$  to calculate a uCi/cc value. This calculated value will be used in MIDAS to perform a dose assessment calculation. \_\_\_\_\_

$$\frac{\text{_____ (cpm)}}{3.55\text{E}+07 \text{ (cpm/uCi/cc)}} = \text{_____ uCi/cc}$$

- 2 INPUT the uCi/cc value into MIDAS under the R45 monitor header using Manual MIDAS Mode (Section 5.6). \_\_\_\_\_

5.3.2 IF ISOTOPIC DATA is available, THEN IMPLEMENT Section 5.7, to perform dose assessment calculations based on isotopic sample values for Hope Creek, Salem Unit 1, or Salem Unit 2. \_\_\_\_\_

## 5.4 Common Commands For MIDAS

5.4.1 PERFORM the following steps to change the DATE and/or TIME for the PC based MIDAS dose assessment system for Hope Creek, Salem Unit 1, and Salem Unit 2:

- A. **POWER UP** the computer. (The Microsoft Windows NT Screen will appear with a Begin Logon box displayed. The command inside the box will read:  
Press Ctrl + Alt + Delete to logon). \_\_\_\_\_
- B. **DEPRESS** the **Ctrl, Alt, Delete** keys simultaneously. (The Logon Information box will be displayed with blanks to enter User name and Password). \_\_\_\_\_
- C. **INPUT** **admin** into the User name blank. \_\_\_\_\_
- D. **INPUT** **secret** into the Password blank and depress the **RETURN** key. (The Main Windows screen will be displayed with several icons. The CAPTURE Eze97 screen will appear momentarily, while it loads and then be displayed in a box in the lower left hand corner next to the Start box). \_\_\_\_\_
- E. **POSITION** the cursor over the **MY COMPUTER** icon and double click the mouse. (The MY COMPUTER box will be displayed with different icons in the box). \_\_\_\_\_
- F. **POSITION** the cursor over the **CONTROL PANEL** icon and double click the mouse. (The DATE/TIME icon will be displayed with several other icons). \_\_\_\_\_
- G. **Position** the cursor over the **DATE/TIME** icon and double click the mouse. (The DATE/TIME PROPERTIES screen will be displayed with the current month, date, and time highlighted). \_\_\_\_\_
- H. **IF** the DATE/TIME Properties screen is not displayed, **THEN POSITION** the cursor over the **DATE & TIME** file and click the mouse once. \_\_\_\_\_
- I. **POSITION** the cursor on the **DOWN ARROW** adjacent to the month, and click the mouse once. \_\_\_\_\_
- J. **PERFORM** the following to change the **MONTH**:
  - **POSITION** the cursor over the appropriate month and click the mouse once. \_\_\_\_\_

- K. PERFORM the following to change the **YEAR**:
- POSITION the cursor on the **UP or DOWN ARROW** next to the **CURRENT YEAR** box and click the mouse until the appropriate year is displayed. \_\_\_\_\_
- L. PERFORM the following to change the **CALENDAR DATE**:
- POSITION the cursor on the **CALENDAR DATE** you wish to change and click the mouse once. \_\_\_\_\_
- M. PERFORM the following to change the **CURRENT HOUR**:
- POSITION the cursor to the left side of the **CURRENT HOUR** that is displayed in the time box, and click the mouse until the appropriate hour is displayed.  
[EXAMPLE: For 12:15:30 it would look like 12I:15:30. (I is the cursor)]. \_\_\_\_\_
- N. PERFORM the following to change the **CURRENT MINUTE**:
- POSITION the cursor to the left side of the **CURRENT MINUTE** that is displayed in the time box, and click the mouse until the appropriate minute is displayed.  
[EXAMPLE: For 12:15:30 it would look like 12:15I:30.(I is the cursor)]. \_\_\_\_\_
- O. PERFORM the following to change the **CURRENT SECOND**:
- POSITION the cursor to the left side of the **CURRENT SECOND** that is displayed in the time box, and click the mouse until the appropriate minute is displayed.  
[EXAMPLE: For 12:15:30 it would look like 12:15:30I. (I is the cursor)]. \_\_\_\_\_
- P. PERFORM the following to change from **PM to AM or AM to PM**:
- POSITION the cursor on the displayed **AM/PM** and click the mouse once. Use the **UP or DOWN ARROW** adjacent to the time box to change the **AM/PM** by clicking the mouse once. \_\_\_\_\_



Q. PERFORM the following to **APPLY THE CHANGES, EXIT OUT OF THIS MODE, AND RUN MIDAS:**

1. POSITION the cursor on the **APPLY** box and click the mouse once. \_\_\_\_\_
2. POSITION the cursor on the **OK** box and click the mouse once. \_\_\_\_\_
3. POSITION the cursor over the **X** located in the upper right hand corner of the **CONTROL PANEL** box and click the mouse once. \_\_\_\_\_
4. POSITION the cursor over the **X** located in the upper right hand corner of the **MY COMPUTER** box and click the mouse once. \_\_\_\_\_
5. POSITION the cursor on the **START** and click the mouse once. (The **WINDOWS NT WORKSTATION** box will be displayed). \_\_\_\_\_
6. POSITION the cursor on the **SHUT DOWN** box and click the mouse once. (The **SHUT DOWN WINDOWS** box will be displayed). \_\_\_\_\_
7. POSITION the cursor on the close **ALL PROGRAMS** and **LOG ON AS A DIFFERENT USER** circle and click the mouse once. (The circle will become filled in). \_\_\_\_\_
8. POSITION the cursor over the **YES** box and click the mouse once. (The computer will start to close all programs. The **BEGIN LOGON** box will appear). \_\_\_\_\_
9. DEPRESS the **Ctrl, Alt, Delete** keys simultaneously. (The Logon Information box will be displayed with lines to enter User name and Password). \_\_\_\_\_
10. INPUT **midas** into the User name line. \_\_\_\_\_
11. INPUT **midas** into the Password line and depress the **RETURN/ENTER** key. \_\_\_\_\_
12. POSITION the cursor over the **Midas** icon and double click the mouse. (The **MIDAS Program** will start). \_\_\_\_\_

5.4.2 PERFORM the following steps to **EXIT MIDAS** using **CTRL, ALT, and DELETE** keys for Hope Creek, Salem Unit 1, and Salem Unit 2:

- A. DEPRESS the **CTRL, ALT, and Delete** keys simultaneously. (The Windows NT Security box will be displayed). \_\_\_\_\_
- B. MOVE the cursor to the **Shut Down** box and click the mouse once. (The Shutdown Computer box will be displayed with the Shutdown circle filled in). \_\_\_\_\_
- C. MOVE cursor to the **OK** box and click the mouse once. (The MIDAS – FROZEN box will be displayed). \_\_\_\_\_
- D. MOVE the cursor to the **End Task** box and click the mouse once. The computer will begin to restart. (All data inputted and dose assessment calculations will be lost). \_\_\_\_\_
- E. POSITION the cursor over the **RESET** box and click the mouse once to reset data that is displayed in a data box. \_\_\_\_\_

**NOTE**

- The Station Status Checklist (SSCL) will printout automatically after the dose assessment calculations have finished.
- Step 5.4.3 provides instructions for using the SSCL Box to print an additional SSCL.
- Step 5.4.3 provides instructions for using the SSCL Box to print a SSCL to the screen, if the printer is malfunctioning. A blank SSCL page 2 can be found in ECG Attachment 8 or obtained from Communicator Number 2.

5.4.3 PERFORM the following to **PRINT A SSCL**.

- A. POSITION the cursor to the **SSCL Box** located on the **Reports Screen**. \_\_\_\_\_
- B. CLICK the mouse. The latest SSCL will be printed to the screen and the printer. \_\_\_\_\_

5.4.4 PERFORM the following to PRINT A SCREEN, REPORT, OR MAP:

A. DEPRESS ALT + ENTER \_\_\_\_\_

B. DEPRESS PRINT SCREEN keys. \_\_\_\_\_

C. DEPRESS the ALT + ENTER keys to  
EXIT the print option and to continue with normal MIDAS  
operation. \_\_\_\_\_

5.5 **PERFORM THE FOLLOWING TO PRODUCE A SSCL PAGE 2 USING THE AUTOMATIC DOSE ASSESSMENT MODE**

**NOTE**

- IF at any time while performing Automatic Data Acquisition, the following appears on the screen:

**NO RESPONSE FROM DADIS – (HOPE CREEK/SALEM) TO DADIS  
DATA COLLECTION FROM DADIS WAS TERMINATED  
ENTER OPTION: [YE] TRY DATA COLLECTION AGAIN  
[NO] PROCEED WITH MANUAL ENTRY**

Respond in the following manner:

Select YE. IF the above message appears again, Select NO and proceed with data entry IAW Section 5.5.

- Dose Assessment MIDAS in automatic mode will not function correctly unless all appropriate Plant Vent Effluent monitor(s) and the Meteorological data are operational. Section 5.6 of this procedure should be used, if the appropriate Plant Vent Monitoring data point(s) or the Meteorological data point(s) are **NOT** available.

- 5.5.1 POSITION the cursor over **ACCIDENT DOSE CALCULATIONS (AC)** box and click the mouse once. (Your selection will become highlighted). \_\_\_\_\_
- 5.5.2 POSITION the cursor over the **CONFIRM** box and click the mouse once. (It will become highlighted and the Accident Dose Calculations (AC) screen will appear). \_\_\_\_\_
- 5.5.3 POSITION the cursor over the **Quick Dose Projection AUTO REAL TIME (Menu A)** box and click the mouse once. (Your selection will become highlighted). \_\_\_\_\_
- 5.5.4 POSITION the cursor over the **CONFIRM** box and click the mouse once. MIDAS will start to perform dose assessment calculations. (The calculating screen will appear. The SSCL will automatically printout and the 10-mile map will appear on the screen). \_\_\_\_\_
- 5.5.5 POSITION the cursor to the **CONTINUE** box on the bottom of the screen and click the mouse once. (The **NEXT REPORT** box will replace the **CONTINUE** box). \_\_\_\_\_

5.5.6 POSITION the cursor over the **NEXT REPORT** box and click the mouse once. (The **MORE REPORTS** box will replace the **NEXT REPORT** box). \_\_\_\_\_

5.5.7 POSITION the cursor over the **MORE REPORTS** box and click the mouse once. (The More Reports Selection screen will appear). \_\_\_\_\_

**NOTE**

- Step 5.5.8 provides instructions for utilizing the SSCL Box to print a SSCL to the screen, if the printer is malfunctioning.
- Step 5.5.8 provides instructions for utilizing the SSCL Box to print an additional SSCL.
- A blank SSCL page 2 can be found in ECG Attachment 8 or obtained from Communicator 2.

5.5.8 IF a SSCL needs be printed to the screen or an additional SSCL printed out, THEN:

- A. POSITION the cursor over the **SSCL Box** and click the mouse once. \_\_\_\_\_
- B. POSITION the cursor over the **CONFIRM** box and click the mouse once. (The SSCL will be printed to the screen, and if the printer is functioning, an additional SSCL will be printed out). \_\_\_\_\_

5.5.9 POSITION the cursor over the **EXIT** box and click the mouse once. (The box will become highlighted). \_\_\_\_\_

5.5.10 CLICK the mouse again. (The Function Selection screen will appear). \_\_\_\_\_

5.5.11 IF another dose assessment calculation and SSCL is needed, THEN REPEAT steps 5.5.1 through 5.5.9. \_\_\_\_\_

5.5.12 IF you need to exit the MIDAS program, THEN:

- A. POSITION the cursor over the **EXIT** box and click the mouse twice. (The Unit Selection screen will appear). \_\_\_\_\_
- B. POSITION the cursor over the **EXIT** box, click the mouse twice. \_\_\_\_\_

5.6 **PERFORM THE FOLLOWING TO PRODUCE A SSCL  
PAGE 2 USING THE MANUAL DOSE ASSESSMENT  
MODE**

**NOTE**

**Manual Mode** Dose Assessment, should be performed IF:

- A Plant Vent Effluent monitor is not operational.
- A surveillance of the Plant Vent Effluent monitor is ongoing.
- Automatic radiological data acquisition is not operational.
- Automatic meteorological data acquisition is not operational.
- To input the total isotopic noble gas and iodine 131 value.

5.6.1 POSITION the cursor over the **ACCIDENT DOSE CALCULATIONS (AC)** box and click the mouse once. (Your selection will become highlighted).

5.6.2 POSITION the cursor over the **CONFIRM** box and click the mouse once. (Your selection will become highlighted and the Accident Dose Calculations (AC) screen will appear).

5.6.3 POSITION the cursor over **MANUAL ENTRY ON SPREADSHEET (MENU C)** and click the mouse once. Your selection will become highlighted.

5.6.4 POSITION the cursor over the **CONFIRM** box and click the mouse once. (The box will become highlighted and the Scenario Data Table Control screen will appear).

5.6.5 SELECT the **appropriate box** by referring to the below guidance, And, position the cursor in that box:

- IF this is the first initial input or the first input after a radiological release  $\geq$  technical specifications, THEN SELECT **START NEW SCENARIO** box and click the mouse once. (The **START NEW SCENARIO** and **WARNING CURRENT DATA WILL BE ERASED** boxes will become highlighted).
- IF this is updating dose assessment calculations, THEN SELECT **CURRENT SCENARIO EDIT** box and click the mouse once. (The **CURRENT SCENARIO EDIT** box will become highlighted).

- IF a previous dose assessment run has been calculated by MIDAS, and the user wishes to view the plume map from that previous run and **NOT** obtain a **VALID SSCL**, THEN **SELECT CURRENT SCENARIO NO EDIT** box and click the mouse once. (The **CURRENT SCENARIO NO EDIT** box will become highlighted).

**NOTE**

15-minute average Meteorological conditions should be inputted every 15 minutes. (MIDAS will treat the release as a puff release that lasted only 15 minutes, if appropriate 15-minute increments are not inputted).

- 5.6.6 POSITION the cursor over the **CONFIRM** box and click the mouse once. (The box will become highlighted and the Meteorological Spread Sheet screen will appear with the current time highlighted. A blue rectangle will be displayed under the **SPD33P (MPH)** column).

**NOTE**

The 300 foot wind speed should be used for the 33 foot wind speed, if the 33 foot wind speed is not available.

- 5.6.7 MOVE the blue rectangle down the **SPD33 (MPH)** column until it is next to the highlighted time using the down arrow key.
- 5.6.8 INPUT **appropriate data** for the 33 foot elevation wind speed.

**NOTE**

The 33 foot wind speed should be used for the 300 foot wind speed, if the 300 foot wind speed is not available.

- 5.6.9 MOVE the blue rectangle over to the **SPD300 (MPH)** column using the right arrow key.
- 5.6.10 INPUT **appropriate data** for the 300 foot elevation wind speed.
- 5.6.11 MOVE the blue rectangle over to the **DIR33P (DEG)** using the right arrow key.

5.6.12 INPUT **appropriate data** for the 33 foot elevation wind direction. \_\_\_\_\_

**NOTE**

The Default Value of one (1.0) should be used for DT300, if the delta t data is not available. This will produce an "E" stability class.

5.6.13 MOVE the blue rectangle over to the **DT300 (DEG C)** using the right arrow key. \_\_\_\_\_

5.6.14 INPUT **appropriate data** for the 300 - 33 foot delta temperature. \_\_\_\_\_

**NOTE**

MIDAS does not use the value for the ambient temperature. Twenty (20) degrees should be used for ambient temperature.

5.6.15 MOVE the blue rectangle over to the **TEM33 (DEG C)** using the right arrow key to input the ambient temperature. \_\_\_\_\_

5.6.16 INPUT **20** for the ambient temperature. \_\_\_\_\_

5.6.17 MOVE the blue rectangle over to the **RAINFL (IN)** using the right arrow key. \_\_\_\_\_

5.6.18 INPUT **appropriate data for the 15-minute average rainfall.**  
(The values 0.08 for Heavy, 0.02 for Moderate, and 0.01 for Light, rainfall may be used if actual rainfall in inches is not known). \_\_\_\_\_

5.6.19 DEPRESS the **ENTER** key. \_\_\_\_\_

5.6.20 IF all inputs are correct, THEN Depress the **X** key. (The Gaseous Vent and Flow screen will appear with the current time highlighted). \_\_\_\_\_

5.6.21 IF all inputs are **NOT** correct, THEN use the arrow keys to go back to the appropriate column(s) and input correct data and depress the **X** key. (The Gaseous Vent and Flow screen will appear with the current time highlighted). \_\_\_\_\_

5.6.22 Refer to the **NOTE** below for guidance concerning which monitor(s) and value(s) to select and input into MIDAS. \_\_\_\_\_



**NOTE****FOR HOPE CREEK AND SALEM UNIT 1 & 2**

- 10 or 15 Minute Average Plant vent (PV) monitor data and PV flow rates should be inputted every 15 Minutes.
- Monitoring Points with – DI next to them (i.e. FRVS – DI, R45 - DI) should be used to input the total I -131 isotopic value in uCi/cc, when available from a plant vent sample.

**FOR HOPE CREEK ONLY**

- The following monitoring points are available for use in manual dose assessment mode:  
(NPV-P, NPV-I, NPV-NG, NPV-DI), (SPV-P, SPV-I, SPV-NG, SPV-DI), (FRVS-NG, FRVS-DI), (HTV-NG, HTV-DI)

**FOR SALEM UNIT 1 & 2 ONLY**

- Follow the below guidance to help in making the correct decision of which R41 monitor value to use. Only **ONE** should be used in MIDAS for performing dose assessment.
  - **R41A** should be used if values are between **1E-08 uCi/cc to 9.99E-02 uCi/cc.**
  - **R41B** should be used if values are **> 1E-01 uCi/cc to 9.99E+01 uCi/cc.**
  - **R41C** should be used if values are **> 1E+02 uCi/cc to 1E+05 uCi/cc.**
- **The R45 monitors** are to be used **ONLY** if the R41B or R41C monitor values are not available.  
Follow the below guidance in making the correct decision of which R45 monitor value to use. Only **ONE** should be used in MIDAS for performing dose assessment.
  - **R45B** should be used if values are **> 1E-03 uCi/cc to 1E+01 uCi/cc.**
  - **R45C** should be used if values are **> 1E+01 uCi/cc to 1E+05 uCi/cc.**
- **R46:** Dose assessment may be performed using the **R46 monitor** value during a primary to secondary leak or SGTR and entered in the R46MSL column in MIDAS.
- **Using Contact TELETECTOR VALUES From The MAIN STEAM LINES In MIDAS.**
  - Refer to section 5.2 concerning where contact readings on the Main Steam Lines should be taken.
  - The Teletector value obtained from contact reading (in mR/hr) on the MSL **MUST** be multiplied by the **Correction Factor of 9.33E-05** prior to being used in MIDAS.
  - The value should be entered in the R46MSL column.
  - The flow rate in lbs/hr may be obtained from the Control Room. (The value 4.50E+05 lbs/hr should be used as the default flow rate, if the actual flow rate is not known).
- **R44:** The **R44 Monitor** values should be used for “**WHAT IF**” type Calculations or if the Containment has been breached and an unmonitored release is progress
  - The flow rate range for the R44's is 1 to 1000 cfm, with the 1000 being the worse case (most conservative) scenario.

5.6.23 MOVE the blue rectangle over to the right until the monitor of interest is highlighted using right arrow key. \_\_\_\_\_

**NOTE**

Hope Creek's Hardened Torus Vent should be inputted in uCi/second. **NO** Plant Vent Flow Rate should be inputted. All other Plant Vent Effluent data for **Hope Creek and Salem Unit 1 & 2** should be inputted in uCi/cc and include Plant Vent Flow Rates for each monitor that was inputted.

5.6.24 INPUT appropriate 10 or 15 minute average radiological data, or Instantaneous data, if the criteria listed in Section 5.2 are met. \_\_\_\_\_

5.6.25 MOVE the blue rectangle over to the right one position to flow rate for the monitor selected. \_\_\_\_\_

5.6.26 INPUT appropriate flow rate in cfm (or lbs/hr for MSL Data). \_\_\_\_\_

5.6.27 DEPRESS the ENTER key. \_\_\_\_\_

5.6.28 IF all inputs are correct, THEN DEPRESS the X key \_\_\_\_\_

5.6.29 IF an input is incorrect, THEN correct it and DEPRESS the X key. (The DBA Accident Type Selection screen will appear with the **UNKNOWN MIX** box highlighted). \_\_\_\_\_

**NOTE**

Unless directed by the RAC or RSM, UNKNOWN MIX should be used.

5.6.30 POSITION the cursor over the **CONFIRM** box and click the mouse once. (The **WARNING - SOURCE IS ZERO FOR SELECTED POINT(S)**, with the points of that the user didn't input data for will appear). \_\_\_\_\_

5.6.31 POSITION the cursor over the **CONTINUE** box and click the mouse once. (The box will become highlighted and the Release Timing Selection screen will appear with the Trip Date, Release Start Same As Trip Date, and Duration (Minutes) boxes will become highlighted). \_\_\_\_\_

5.6.32 INPUT the duration of a release in minutes by performing the following:

- A. POSITION the cursor over the **REMAINING DURATION (MIN)** box and CLICK the mouse once. (A pop-up screen will appear in the upper right hand corner of the screen). \_\_\_\_\_
- B. POSITION the cursor over the **appropriate number(s)** you wish to enter (**use 240 minutes for a four hour default release, if the duration of a release is not known**) and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). \_\_\_\_\_
- C. POSITION the cursor over the **EN** box and CLICK the mouse once. (The value selected will now appear in the highlighted **REMAINING DURATION (MINUTES)** box). \_\_\_\_\_
- D. IF the information was inputted incorrectly, THEN position the cursor over the **CL** box and CLICK the mouse once to clear the entire input that is displayed in the top portion of pop-up screen and reenter. \_\_\_\_\_
- E. POSITION the cursor over the **CONFIRM** box and click the mouse once. (MIDAS will start to perform calculations. The calculating screen will appear. The SSCL will automatically printout and the 10-mile TEDE 4-DAY map will appear on the screen). \_\_\_\_\_

5.6.33 MOVE the cursor to the **CONTINUE** box on the bottom of the screen and click the mouse once. (The **NEXT REPORT** box will replace the **CONTINUE** box). \_\_\_\_\_

5.6.34 POSITION the cursor over the **NEXT REPORT** box and click the mouse once. (The **MORE REPORTS** box will replace the **NEXT REPORT** box). \_\_\_\_\_

5.6.35 POSITION the cursor over the **MORE REPORTS** box and click the mouse once. (The More Reports Selection screen will appear). \_\_\_\_\_

#### NOTE

- Step 5.6.36 provides instructions for using the SSCL Box to print a SSCL to the screen if the printer is malfunctioning.
- Step 5.6.36 provides instructions for using the SSCL Box to print an additional SSCL.
- A blank SSCL page 2 can be found in ECG Attachment 8 or obtained from Communicator 2.

5.6.36 IF a SSCL needs be printed to the screen or an additional SSCL is needed to be printed, THEN:

- A. POSITION the cursor over the **SSCL** Box and click the mouse once. \_\_\_\_\_
- B. POSITION the cursor over the **CONFIRM** box and click the mouse once. (The SSCL will be printed to the screen, and if the printer is functioning, an additional SSCL will be printed out). \_\_\_\_\_

5.6.37 POSITION the cursor over the **EXIT** box and click the mouse once. (The box will become highlighted). \_\_\_\_\_

5.6.38 CLICK the mouse again. (The Function Selection screen will appear). \_\_\_\_\_

5.6.39 IF another dose assessment calculation and SSCL is needed, THEN REPEAT steps 5.6.1 through 5.6.38. \_\_\_\_\_

5.6.40 IF you need to exit the MIDAS program, THEN:

- A. POSITION the cursor over the **EXIT** box and click the mouse twice. (The Unit Selection screen will appear). \_\_\_\_\_
- B. POSITION the cursor over the **EXIT** box, click the mouse twice. \_\_\_\_\_

5.7 **PERFORM THE FOLLOWING TO PRODUCE A SSCL  
PAGE 2 USING THE ISOTOPIC DOSE ASSESSMENT  
MODE**

**NOTE**

- Dose Assessment should be performed in Isotopic Mode, if Dose Assessment calculations are being performed using Isotopic Plant Vent Grab Sample data.
- IF at any time while performing Automatic Data Acquisition, the following appears on the screen:

**NO RESPONSE FROM DADIS - HOPE CREEK TO DADIS  
DATA COLLECTION FROM DADIS WAS TERMINATED  
ENTER OPTION: [YE] TRY DATA COLLECTION AGAIN  
[NO] PROCEED WITH MANUAL ENTRY**

Respond in the following manner: Choose NO and proceed with following the steps listed in this section (5.7) of this procedure.

5.7.1 POSITION the cursor over the **ACCIDENT DOSE CALCULATIONS (AC)** box and **CLICK** the mouse once. (Your selection will become highlighted). \_\_\_\_\_

5.7.2 POSITION the cursor over the **CONFIRM** box and **CLICK** the mouse once. (Your selection will become highlighted and the Accident Dose Calculations (AC) screen will appear). \_\_\_\_\_

5.7.3 POSITION the cursor over **ADVANCED CALCS ALL SCREENS (MENU X)** and **CLICK** the mouse once. Your selection will become highlighted. \_\_\_\_\_

5.7.4 POSITION the cursor over the **CONFIRM** box and **CLICK** the mouse once. (The box will become highlighted. MIDAS will attempt to collect automatic data . The Miscellaneous Parameters screen will then appear). \_\_\_\_\_

5.7.5 PERFORM the following to highlight appropriate selections:

A. POSITION the cursor over the **RESET** box and **CLICK** the mouse. Boxes will no longer be highlighted. \_\_\_\_\_

B. POSITION the cursor over the **MANUAL** box and **CLICK** the mouse once. \_\_\_\_\_

- C. POSITION the cursor over the appropriate **RELEASE POINT(S)** and **CLICK** the mouse once. The box will become highlighted. \_\_\_\_\_
- D. POSITION the cursor over the **FLOW EX VEL (CFM)** box for the release point chosen and **CLICK** the mouse once. (A pop-up screen will appear). \_\_\_\_\_
- E. INPUT the exit velocity flow rate using the pop-up screen by positioning the cursor over the correct **value(s)** and **CLICKING** the mouse once. \_\_\_\_\_
- Exit Velocity For HOPE CREEK: ZERO (0) for all REL PTs.
  - Exit Velocity For SALEM: ZERO (0) for REL PTs. 1 and 4
  - Exit Velocity For SALEM: (95) for REL PT 2
- F. INPUT the exit velocity flow rate using the pop-up screen by positioning the cursor over the **correct value(s)**, selected from above, and **CLICKING** the mouse once. \_\_\_\_\_
- G. POSITION the cursor over the **EN** box when the appropriate values are inputted and **CLICK** the mouse once. (The box will become highlighted with the flow rate inside the box). \_\_\_\_\_
- H. POSITION the cursor over the **MAX DIST DOWNWIND (MILES)** box and **CLICK** the mouse once. A pop-up screen will appear. \_\_\_\_\_
- I. INPUT **10** using the pop-up screen. \_\_\_\_\_
- J. POSITION the cursor over the **EN** box and **CLICK** the mouse once. (The box will become highlighted with 10 appearing inside the box). \_\_\_\_\_
- 5.7.6 POSITION the cursor over the **AUTO SCENARIO INTEGRATION** box and **CLICK** the mouse once. (The box will become highlighted). \_\_\_\_\_
- 5.7.7 POSITION the cursor over the **CONFIRM** box and **CLICK** the mouse once. (The box will become highlighted and Run Mode and Integration screen will appear). \_\_\_\_\_
- 5.7.8 POSITION the cursor over the **PROJECTED (FORECAST) DOSE** box and **CLICK** the mouse once. \_\_\_\_\_

- 5.7.9 POSITION the cursor over the **START DATE INTEG.**  
**CURRENT** Box and **CLICK** the mouse once. \_\_\_\_\_
- 5.7.10 IF the **PROJ. TIMES (HRS)** box does have **.25, 1, 4, 24**  
Displayed, THEN go to step 5.7.14. \_\_\_\_\_
- 5.7.11 IF the **PROJ. TIMES (HRS)** box doesn't have **.25, 1, 4, 24**  
displayed and highlighted inside of the box, THEN POSITION the  
cursor over the **PROJ. TIMES (HRS)** box and **CLICK** the mouse  
once. (A pop-up screen will appear in the upper right of the  
screen). \_\_\_\_\_
- 5.7.12 INPUT **.25, 1, 4, 24** using the pop-up screen. \_\_\_\_\_
- 5.7.13 POSITION the cursor over the **EN** box when  
the appropriate values are inputted and **CLICK** the  
mouse once. (The box will become highlighted with the  
values displayed inside the box). \_\_\_\_\_
- 5.7.14 POSITION the cursor over the **CONFIRM** box and **CLICK** the  
mouse once. (The box will become highlighted and the Release  
Option Selection screen will appear). \_\_\_\_\_
- 5.7.15 POSITION the cursor over the **MANUAL ENTRY OF**  
**ISOTOPE CONCENTRATION** box and **CLICK** the mouse  
once. (The box will become highlighted). \_\_\_\_\_
- 5.7.16 POSITION the cursor over the **CONFIRM** box and **CLICK** the mouse  
once. (The Isotope Concentrations screen for the release point  
selected will appear). \_\_\_\_\_
- 5.7.17 POSITION the cursor over the **RESET** box and **CLICK** the mouse. \_\_\_\_\_
- 5.7.18 POSITION the cursor over the **appropriate isotope box(es)** and  
**CLICK** the mouse once. [The box(es) will become highlighted  
and a pop up screen will appear in the right corner of the screen]. \_\_\_\_\_
- 5.7.19 POSITION the cursor over the **appropriate number(s)** you wish to  
enter and **CLICK** the mouse once. (The number you chose will be  
displayed in the top portion of the pop up screen). \_\_\_\_\_
- 5.7.20 IF the value(s) displayed is correct, THEN PLACE the cursor  
over the **EN** box and **CLICK** the mouse once. (The value selected  
will be displayed in the box). \_\_\_\_\_
- 5.7.21 IF the value is incorrect, THEN position the cursor over the **CL**  
box and **CLICK** the mouse once. (This will clear the input that is  
displayed in the top portion of the pop-up screen and allow you to  
reenter the value(s). \_\_\_\_\_

- 5.7.22 POSITION the cursor over the **SAMPLE STREAM FLOW RATE (CFM)** box to input the plant vent flow rate and CLICK the mouse once. (The box will become highlighted and a pop-up screen will appear in the right corner of the screen). \_\_\_\_\_
- 5.7.23 Input the **appropriate value(s)** using the pop-up screen. \_\_\_\_\_
- 5.7.24 IF the value(s) displayed is correct, THEN PLACE the cursor over the **EN** box and CLICK the mouse once. (The value selected will be displayed in the box). \_\_\_\_\_
- 5.7.25 IF the value(s) is incorrect, THEN position the cursor over the **CL** box and CLICK the mouse once. (This will clear the input that is displayed in the top portion of the pop-up screen and allow you to reenter the value(s). \_\_\_\_\_
- 5.7.26 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The Release Timing Selection screen will appear). \_\_\_\_\_
- 5.7.27 POSITION the cursor over the **RELEASE CURRENT TIME** box and CLICK the mouse once. \_\_\_\_\_
- 5.7.28 POSITION the cursor over the **DURATION (MINUTES)** box and CLICK the box once. A pop-up screen will appear in the upper right corner of the screen. \_\_\_\_\_
- 5.7.29 INPUT the duration of the release in minutes (**240 minutes if the release duration is unknown**) using the pop-up screen. \_\_\_\_\_
- IF the value(s) displayed is correct, THEN PLACE the cursor over the **EN** box and CLICK the mouse once. (The value selected will be displayed in the box). \_\_\_\_\_
  - IF the value is incorrect, THEN position the cursor over the **CL** box and CLICK the mouse once. (This will clear the input that is displayed in the top portion of the pop-up screen and allow you to reenter the value(s). \_\_\_\_\_
- 5.7.30 CLICK the mouse once. (The **DURATION** box will become highlighted with the value displayed in the box). \_\_\_\_\_
- 5.7.31 POSITION the cursor over the **CONFIRM** box and click the mouse once. (The Weather Selection screen will appear). \_\_\_\_\_



5.7.32 PERFORM the following steps to input meteorological data :

**NOTE**

- The user will **NOT** be prompted for the SPD33P (MPH) if the release is an elevated release.
- The 300 foot wind speed should be used for the 33 foot wind speed, if the 33 foot wind speed is not available.

- A. POSITION the cursor over the **DIR33P (DEG)** box and CLICK the mouse once to input the 33 foot elevation from wind direction. \_\_\_\_\_
- B. POSITION the cursor over the **appropriate number(s)** you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). \_\_\_\_\_
- C. MOVE the cursor over the **EN** box and CLICK the mouse once. [The value chosen will be displayed in specific weather parameter box that is being inputted (i.e. DIR33P DEG)]. \_\_\_\_\_
- D. POSITION the cursor over the **SPD33P (MPH)** box and CLICK the mouse once to input the 33 foot elevation wind speed. \_\_\_\_\_
- E. POSITION the cursor over the **appropriate number(s)** you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). \_\_\_\_\_
- F. MOVE the cursor over the **EN** box and CLICK the mouse once. [The value chosen will be displayed in specific weather parameter box that is being inputted (i.e. SPD33P MPH)]. \_\_\_\_\_

**NOTE**

- The user will **NOT** be prompted for the SPD300 (MPH) if the release is a ground release.
- The 33 foot wind speed should be used for the 300 foot wind speed, if the 300 foot wind speed is not available.

- G. POSITION the cursor over the **SPD300 (MPH)** box and CLICK the mouse once to input the 300 foot elevation wind speed. \_\_\_\_\_
- H. POSITION the cursor over the **appropriate number(s)** you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). \_\_\_\_\_
- I. MOVE the cursor over the **EN** box and CLICK the mouse once. (The value chosen will be displayed in specific weather parameter box). \_\_\_\_\_

**NOTE**

The Default Value of one (1.0) should be used for DT300, if the delta t data is not available. This will produce an "E" stability class.

- J. POSITION the cursor over the **DT300 (DEG.C)** box and CLICK the mouse once to input the 300 - 33 foot delta temperature. (The box will become highlighted). \_\_\_\_\_
- K. POSITION the cursor over the **appropriate number(s)** you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). \_\_\_\_\_
- L. MOVE the cursor over the **EN** box and CLICK the mouse once. (The value chosen will be displayed in specific weather parameter box). \_\_\_\_\_

**NOTE**

MIDAS does not use the value used for the ambient temperature. Twenty (20) degrees should be used.

- M. POSITION the cursor over the **TEM33 (DEG.C)** box and CLICK the mouse once to input the ambient temperature. (The box will become highlighted). \_\_\_\_\_
- N. INPUT the value 20 and CLICK the mouse once. (The number 20 will be displayed in the top portion of the pop-up screen). \_\_\_\_\_

- O. MOVE the cursor over the **EN** box and **CLICK** the mouse once. (The value chosen will be displayed in specific weather parameter box). \_\_\_\_\_
- P. POSITION the cursor over the **RAIN (INCHES)** box and **CLICK** the mouse once to input the 15 minute average precipitation. (The box will become highlighted). \_\_\_\_\_

**NOTE**

The following values may be inputted if actual rainfall data is not known:

- 0.08 = (Heavy Rainfall)
- 0.02 = (Moderate Rainfall)
- 0.01 = (Light Rainfall)
- The number Zero "0", if it is not raining.

- Q. POSITION the cursor over the **appropriate number(s)** you wish to enter and **CLICK** the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). \_\_\_\_\_
- R. MOVE the cursor over the **EN** box and **CLICK** the mouse once. (The value chosen will be displayed in specific weather parameter box). \_\_\_\_\_

**NOTE**

The three boxes labeled **PCT CLOUD COVER REQUIRES SPEED, USE LAST MET DATE** and **USE DEFAULT MET** should **NOT** be used.

- S. POSITION the cursor over **CONFIRM** box and **CLICK** the mouse once. (The Release Point Data screen will appear). \_\_\_\_\_
- 5.7.33 POSITION the cursor over the **CONTINUE** box and **CLICK** the mouse once. (The box will become highlighted and Summary of Meteorological Data screen will appear). \_\_\_\_\_

5.7.34 POSITION the cursor over **CONTINUE** box and **CLICK** the mouse once. (The calculating screen will appear, while PC MIDAS performs dose assessment calculations. The SSCL will automatically printout and the 10 mile TEDE 4-DAY map will appear on the screen after the calculations are finished.) \_\_\_\_\_

5.7.35 POSITION the cursor to the **CONTINUE** box on the bottom of the screen and **CLICK** the mouse once. (The **NEXT REPORT** box will replace the **CONTINUE** box). \_\_\_\_\_

5.7.36 POSITION the cursor over the **NEXT REPORT** box and **CLICK** the mouse once. (The **MORE REPORTS** box will replace the **NEXT REPORT** box). \_\_\_\_\_

5.7.37 POSITION the cursor over the **MORE REPORTS** box and **CLICK** the mouse once. (The More Reports Selection screen will appear). \_\_\_\_\_

**NOTE**

- Step 5.7.38 provides instructions for utilizing the SSCL Box to print a SSCL to the screen, if the printer is malfunctioning.
- Step 5.7.38 provides instructions for utilizing the SSCL Box to print an additional SSCL.
- A blank SSCL page 2 can be found in ECG Attachment 8 or obtained from Communicator 2.

5.7.38 IF a SSCL needs be printed to the screen or an additional SSCL printed out, THEN:

- A. POSITION the cursor over the **SSCL** Box and **CLICK** the mouse once. \_\_\_\_\_
- B. POSITION the cursor over the **CONFIRM** box and **CLICK** the mouse once. (The SSCL will be printed to the screen, and if the printer is functioning, an additional SSCL will be printed out). \_\_\_\_\_

5.7.39 POSITION the cursor over the **EXIT** box and **CLICK** the mouse once. (The **EXIT** box will become highlighted). \_\_\_\_\_

5.7.40 **CLICK** the mouse again. (The Function Selection screen will appear). \_\_\_\_\_

5.7.41 IF another dose assessment calculation and SSCL is needed,  
THEN REPEAT steps 5.7.1 through 5.7.39. \_\_\_\_\_

5.7.42 IF you need to exit the MIDAS program, THEN:

- A. POSITION the cursor over the **EXIT** box and click the  
mouse twice. (The Unit Selection screen will appear). \_\_\_\_\_
- B. POSITION the cursor over the **EXIT** box, click the mouse  
twice. \_\_\_\_\_

## 5.8 PERFORM THE APPROPRIATE OPERATIONAL INSTRUCTIONS TO MANIPULATE MAP SCREENS AND PRINTOUT MAPS

### CAUTION

The user should wait until the SSCL has finished printing out prior to printing any maps or forms and should **NOT** perform any additional operations while printing out a map or form.

#### 5.8.1 PERFORM the following to **PRINT a SCREEN, REPORT, or MAP:**

- A. DEPRESS the **ALT** key and **HOLD IT DOWN.** \_\_\_\_\_
- B. DEPRESS the **ENTER** key, while **HOLDING DOWN THE ALT KEY.** \_\_\_\_\_
- C. RELEASE the **ALT** and **ENTER** keys. \_\_\_\_\_
- D. DEPRESS the **PRINT SCREEN** key. \_\_\_\_\_

#### 5.8.2 PERFORM the following to **RETURN to NORMAL MIDAS OPERATION.**

- A. DEPRESS the **ALT** key and **HOLD IT DOWN.** \_\_\_\_\_
- B. DEPRESS the **ENTER** key, while **HOLDING DOWN THE ALT KEY.** \_\_\_\_\_

#### 5.8.3 PERFORM the Following Steps to Display A Point Of Interest (POI) Dose Rate:

- A. POSITION the cursor over the **POI** box located at the bottom of the map screen and **CLICK** the mouse once. (The Operational Choices menu located at the bottom of the screen next to the POI box is replaced with the **CURSOR HERE TO EXIT** box). \_\_\_\_\_
- B. POSITION the cursor to the POI on the map and **CLICK** the mouse once. (The dose rate of the POI will appear). \_\_\_\_\_
- C. POSITION the cursor to the **CURSOR HERE TO EXIT** box and **CLICK** the cursor once to return to the other map command options. \_\_\_\_\_

#### 5.8.4 PERFORM the following steps to draw map features onto a map:

- A. POSITION the cursor over the **MAP FEATURES** box and **CLICK** the mouse once. (A Pop-up box will appear at the right side of the screen). \_\_\_\_\_

B. POSITION the cursor over the option(s) selected (**WIND SPIDER, COUNTY BOUNDARIES, ERPAS, and/or TEXT**) to be drawn on the map and **CLICK** the mouse once. (The options selected will become highlighted).

---

C. POSITION the cursor over the **CONFIRM** box and **CLICK** the mouse once. (The Confirm box will become highlighted and the map will be redrawn with the option(s) selected illustrated on it).

---

5.8.5 PERFORM the following to add another or remove the Map Feature Selected Perform.

A. POSITION the cursor over the **MAP FEATURES** box and **CLICK** the mouse once. (A Pop-up box will appear at the right side of the screen).

---

B. POSITION the cursor over the option(s) selected (**WIND SPIDER, COUNTY BOUNDARIES, ERPAS, and/or TEXT**) to be added to or removed from the map and **CLICK** the mouse once. (Any additional options selected will be highlighted, while options to be removed from the map will go from being highlighted to not being highlighted).

---

C. POSITION the cursor over the **CONFIRM** box and click the mouse once. (The Confirm box will become highlighted and the map will be redrawn with the option(s) selected either deleted or illustrated on it).

---

5.8.6 PERFORM the following to select an area on a map to blowup:

A. POSITION the cursor over the **SELECT AREA** box and **CLICK** the mouse once. (The Operational Choices menu located on the bottom of the screen will disappear).

---

B. POSITION the cursor to one edge of the area you wish to enlarge on the screen and **CLICK** the mouse once. (A black dot will appear where the cross hairs of the cursor was).

---

C. POSITION the cursor to other edge of the area you wish to enlarge on the screen and **CLICK** the mouse once. (A black dot will appear where the cross hairs of the cursor was and the area you selected will appear on the screen enlarged with the Operational Choices menu reappearing on the bottom of the screen. This can be done as many times as the user wishes).

---

D. POSITION the cursor over the **RESTORE** box and CLICK the mouse once to return the map to its original size. \_\_\_\_\_

5.8.7 PERFORM the following steps to project the plume into the future using the current meteorological and radiological conditions:

A. POSITION the cursor over the **CONTINUE** box and CLICK the mouse once. (The Operational Choices menu located at the bottom of the screen will disappear being replaced by the PROJ. TIME 0.25 (HOURS), CONFIRM and NEXT REPORT boxes). \_\_\_\_\_

B. POSITION the cursor over the **PROJ. TIME 4.00 (HOURS)** box and:

1. CLICK the mouse to change the projection time to 24.00 hours. \_\_\_\_\_
2. CLICK the mouse again to change the projection time to 0.25 hours. \_\_\_\_\_
3. CLICK the mouse again to change the projection time to 1.00 hours. \_\_\_\_\_
4. CLICK the mouse again to change the projection time back to 4.00 hours. \_\_\_\_\_

C. POSITION the cursor over the **CONFIRM** box when the appropriate projection time has been selected and CLICK the mouse once. (The map will be redrawn showing the plume and radiological conditions projected into the future by the time increment chosen by the user. The map Operational Choices menu will also reappear at the bottom of the screen). \_\_\_\_\_

5.8.8 PERFORM the following steps to change the plume back to 4.00 hour projection time:

A. POSITION the cursor over the **CONTINUE** box and CLICK the mouse once. (The Operational Choices menu located at the bottom of the screen will disappear being replaced by the PROJ. TIME with 1.00, 4.00, or 24.00 HOURS, CONFIRM and NEXT REPORT boxes). \_\_\_\_\_

B. POSITION the cursor over the **PROJ. TIME** box and CLICK the mouse until 4.00 (HOURS) appears. \_\_\_\_\_



- C. POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The map will be redrawn showing the plume and radiological conditions returned to their original state. The map Operational Choices menu will also reappear at the bottom of the screen).
- 

5.8.9 PERFORM the following steps to change the distance of a map displayed:

**NOTE**

A map **MUST** be already displayed prior to varying the map's distance.

- A. POSITION the cursor over the **CONTINUE** box and CLICK the mouse once. (The **CONTINUE** box will be replaced by the **NEXT REPORT** box).
- 
- B. POSITION the mouse over the **NEXT REPORT** box and CLICK the mouse once. (The **NEXT REPORT** box will be replaced by the **MORE REPORTS** box).
- 
- C. POSITION the cursor over the **MORE REPORTS** box and CLICK the mouse once. (The More Reports Selection Screen will appear).
- 
- D. POSITION the mouse over the Report Plot the user would like to select and CLICK the mouse once. (The selection will become highlighted. Maps can be only drawn using **REPORT PLOT** choices).
- 
- E. POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. The box will become highlighted and the Report Parameter Selection screen will appear with the user's selection enclosed in a box in the middle of the screen.
- 
- F. POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The Map Scale Selection screen will appear with the current map distance appearing highlighted in a box in the upper left-hand corner of the screen).
- 
- G. POSITION the cursor over **MAP SCALE (MILES)** box and CLICK the mouse once. (A pop-up screen will appear in the upper right hand corner).
-

- H. POSITION the cursor over the appropriate number(s) you wish to enter and CLICK the mouse once. (The number(s) you chose will be displayed at the top of the pop-up screen).
- I. POSITION the cursor over the **EN** box in the pop-up screen and CLICK the mouse once.
- J. IF the number(s) displayed in the top of the pop up screen is incorrect, THEN position the cursor over the **CL** box and CLICK the mouse once. (This will clear the entire input that is displayed in the top of the pop up screen).
- K. POSITION the cursor over **CONFIRM** box and CLICK the mouse once. (The CONFIRM box will become highlighted and the map will be drawn to the scale selected).

## 6.0 RECORDS

Return completed procedure and any information or data thought to be pertinent by the dose assessor, to the EP Manager.

## 7.0 REFERENCES

### 7.1 References

- 7.1.1 EPA 400, Manual of Protective Action Guides And Protective Actions For Nuclear Incidents
- 7.1.2 MIDAS Documentation Volumes 1-5
- 7.1.3 PSEG Nuclear Emergency Plan

### 7.2 Cross References

- 7.2.1 NC.EP-EP.ZZ-0310(Q), Radiation Protection Supervisor – Offsite and Field Monitoring Team Response
- 7.2.2 NC.EP-EP.ZZ-0313(Q), Advanced Dose Assessment (MIDAS) Instructions
- 7.2.3 NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions
- 7.2.4 HC.EP-EP.ZZ-0301(Q), Shift Radiation Protection Response
- 7.2.5 SC.EP-EP.ZZ-0301(Q), Shift Radiation Protection Response

## ATTACHMENT 1

Page 1 of 3

## OPERATING INSTRUCTIONS FOR THE VAX LA120 TERMINAL

1.0 METEOROLOGICAL DATA1.1 Perform The Following to Obtain Current 15 Minute Average Meteorological Data:

1.1.1 DEPRESS the **RETURN** key. (USERNAME should be displayed).

1.1.2 TYPE **MET** and depress the **RETURN** key.

**NOTE**

The most current meteorological data should be printed out followed by the Main Meteorological Menu. If no other keys are depressed, the current 15-minute average data will be printed out every 15 minutes.

The Salem SPDS may be used to obtain meteorological data IAW NC.EP-EP.ZZ-0009(Z), Salem SPDS Operating Instructions.

1.1.3 ENTER **Option 1** (Display Current Meteorological Data) and Depress the **RETURN** key to receive the current 15 meteorological data print out.

1.2 Perform The Following Steps to Obtain Archived Meteorological Data:

1.2.1 DEPRESS the **RETURN** key. (USERNAME should be displayed).

1.2.2 TYPE **MET** and depress the **RETURN** key. (The most current meteorological data should be printed out followed by the Main Meteorological Menu).

1.2.3 ENTER **Option 2** (Display Meteorological Data From Data Base) and depress the **RETURN** key. (Current system Date and Time will be displayed).

1.2.4 IF this is the data you want, THEN depress the **RETURN** key. (Your option will be printed out).

1.2.5 IF you want data from another date and time, THEN go to Step 1.2.6.

## ATTACHMENT 1

## Page 2 of 3

1.2.6 ENTER **START DATE** and **TIME** as shown below and depress the **RETURN** key. (For December 27, 1989 at 0130 enter 27-DEC-1989 "depress the space bar once" and enter 01:30).

- ENTER "Y" if the information is **correct**.
- ENTER "N" if the information is **not correct** and reenter data as shown in Step 1.2.6.

1.2.7 ENTER the **END DATE** and **TIME** as shown below and depress the **RETURN** key. (For December 28, 1989 at 0230 enter 28-DEC-1989 "depress the space bar once" and enter 02:30).

- ENTER "Y" if the information is **CORRECT**.
- ENTER "N" if the information is **NOT CORRECT** and reenter data as shown in Step 1.2.7.

2.0 **RMS AND MET DATA (FOR HOPE CREEK ONLY)**

2.1 **Perform The Following Steps to Obtain Current Instantaneous RMS and MET Data:**

2.1.1 DEPRESS the **RETURN** key. (USERNAME should be displayed).

2.1.2 TYPE **EOF** and depress the **RETURN** key. (A prompt should be displayed asking for PASSWORD).

2.1.3 TYPE the letters **EOFUSER** and depress the **RETURN** key.  
(The EOF Plant Menu should be displayed.)

2.1.4 SELECT **Option 1** for Hope Creek.

2.1.5 DEPRESS the **RETURN** key. (The EOF Report Options Menu will be displayed).

2.1.6 ENTER **Option 1 (Current RMS Status)** and depress the **RETURN** key. (The most current instantaneous RMS and 15 minute MET data will be printed out.)

ATTACHMENT 1

Page 3 of 3

2.2 **Perform The Following Steps to Obtain 15 Minute Average RMS Data:**

2.2.1 DEPRESS the **RETURN** key. (USERNAME should be displayed).

\_\_\_\_\_

2.2.2 TYPE **EOF** and depress the **RETURN** key. (A prompt should be displayed asking for PASSWORD).

\_\_\_\_\_

2.2.3 TYPE **EOFUSER** and depress the **RETURN** key. (The EOF Plant Menu should be displayed).

\_\_\_\_\_

2.2.4 SELECT **Option 1** for Hope Creek.

\_\_\_\_\_

2.2.5 DEPRESS the **RETURN** key. (The EOF Report Options Menu should be displayed).

\_\_\_\_\_

2.2.6 SELECT and ENTER **Option 6 (15 Minute Historical Data)**.

(Current system date and time should be displayed. A prompt should be displayed for start date and time)

\_\_\_\_\_

2.2.7 DEPRESS the **RETURN** key for 15 minute average RMS and MET data. (Your selection will be printed).

\_\_\_\_\_


NC.EP-EP.ZZ-0310 (Q) Rev. 05

**RADIATION PROTECTION SUPERVISOR - OFFSITE  
AND FIELD MONITORING TEAM RESPONSE****USE CATEGORY: II****PSE&G****CONTROL****COPY # EPIPO59****REVISION SUMMARY:**

1. This revision satisfies the requirement for a biennial review.
2. Deleted Attachment 15, Instructions For Salem SPDS Displays. Instructions are now in NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.
3. Added cross reference of NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.
4. Changed reference in Attachment 2, step 1.1.6.B from Attachment 15 to NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.
5. Changed Manager – EP & IT to Emergency Preparedness Manager in all appropriate portions of the procedure.
6. Rewrote step 1.3.5 from Attachment 3 to delete mention of payment of tolls, since the emergency vehicles are equipped with EZPASS.

**IMPLEMENTATION REQUIREMENTS**Implementation Date: 10/4/02

APPROVED: \_\_\_\_\_

  
Emergency Preparedness Manager9/19/02  
Date

APPROVED: \_\_\_\_\_

N/A  
Vice President - OperationsN/A  
Date

# RADIATION PROTECTION SUPERVISOR - OFFSITE AND FIELD MONITORING TEAM RESPONSE

## TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
1.0	PURPOSE .....	3
2.0	PREREQUISITES .....	3
	2.1 Prerequisites To Be Followed Prior To Implementing This Procedure ..	3
3.0	PRECAUTIONS AND LIMITATIONS.....	3
	3.1 Precaution and Limitations To Be Followed Prior To Implementing This Procedure .....	3
4.0	EQUIPMENT REQUIRED .....	4
5.0	PROCEDURE.....	4
	5.1 The RPS - Offsite Should.....	4
	5.2 The Radiation Protection (RPT - Radio) Should .....	4
	5.3 The Onsite Field Monitoring Team Should .....	4
6.0	RECORDS.....	4
7.0	REFERENCES .....	5
	7.1 References .....	5
	7.2 Cross References .....	5
ATTACHMENTS		
	ATTACHMENT 1 - TSC Pre-activation Checklist.....	6
	ATTACHMENT 2 - RPS-Offsite Checklist.....	8
	ATTACHMENT 3 - Field Monitoring Team Briefing Guidance .....	10
	ATTACHMENT 4 - Onsite Field Monitoring Equipment Checklist.....	15
	ATTACHMENT 5 - Field Monitoring Team Log.....	17
	ATTACHMENT 6 - Particulate Air Activity vs. Count Rate Table .....	22
	ATTACHMENT 7 - Particulate Air Activity vs. Dose Rate Table .....	23
	ATTACHMENT 8 - Direct Conversion Table Of Corrected Counts Per Minute To uCi/CC I-131 .....	24
	ATTACHMENT 9 - Field Monitoring Team Responsibilities and Directions .....	25
	ATTACHMENT 10 - Onsite Protective Action Guidelines .....	28
	ATTACHMENT 11 - Onsite Emergency Monitoring Locations.....	29
	ATTACHMENT 12 - Hope Creek DAPA Correction Calculations.....	32

ATTACHMENT 13 - Package Insert For Thyro-Block Tablets ..... 35

ATTACHMENT 14 - Operation Of The VAX LA120 Terminal ..... 39

FORMS

Form - 1     Habitability Log ..... 42

Form - 2     Dosimetry Log ..... 43



## 1.0 PURPOSE

To outline and describe the Radiation Protection Supervisor – Offsite (RPS – Offsite), Radiation Protection Technician – Radio (RPT-Radio), and Onsite Field Monitoring Team's duties.

## 2.0 PREREQUISITES

### 2.1 Prerequisites To Be Followed Prior To Implementing This Procedure

2.1.1 Implement this procedure at:

- The discretion of the EDO
- The discretion of the RAC.
- The manning of the TSC.

2.1.2 All Onsite Emergency Response Organization members **MUST** have taken and PASSED Rad Worker Training/Rad Worker Requalification and have a TLD.

2.1.3 Personnel who implement this procedure shall be trained and qualified in accordance with (IAW) the Emergency Plan.

## 3.0 PRECAUTIONS AND LIMITATIONS

### 3.1 Precaution and Limitations To Be Followed Prior To Implementing This Procedure

3.1.1 The order of the steps listed in this procedure may be performed in the order deemed appropriate by the RPS – Offsite, RPT – Radio, and Onsite Field Monitoring Team.

3.1.2 Approval of the OS is required prior to the issuance of Potassium Iodide (KI) until a qualified Radiological Assessment Coordinator (RAC) assumes his duties. The authority to designate when and who should receive KI shifts from the OS to the RAC for all Onsite Personnel IAW NC.EP-EP.ZZ-0305(Q), Stable Iodine Thyroid Blocking. The duty of authorizing KI can not be delegated or assumed by any other position.

3.1.3 The RPS-Offsite should assume the RAC's duties until relieved by a qualified RAC by referring to NC.EP-EP.ZZ-0302(Q), Radiological Assessment Coordinator Response.

3.1.4 Medical care takes priority over any radiological conditions, unless the radiological conditions are life threatening.

3.1.5 It is recommended that initials be used in the step performance check offs/sign-offs, instead of checkmarks, if more than one person is implementing this procedure.

3.1.6 Personnel who implement this procedure shall be trained and qualified in accordance with (IAW) the Emergency Plan.

#### 4.0 **EQUIPMENT REQUIRED**

As provided in the Emergency Response Facility.

#### 5.0 **PROCEDURE**

##### 5.1 **The RPS-Offsite Should:**

5.1.1 IF the RAC has not arrived at the TSC, THEN ASSUME the RAC's duties until he/she arrives by implementing NC.EP-EP.ZZ-0302(Q), Radiological Assessment Coordinator Response.

#### **NOTE**

The RPS-Offsite reports directly to the RAC.

5.1.2 ASSUME his/her own duties when a qualified RAC assumes the duties of the RAC, by implementing Attachment 1, TSC Pre-activation Checklist, of this procedure, unless directed otherwise by the RAC.

##### 5.2 **The Radiation Protection – Radio (RPT-Radio) Should:**

#### **NOTE**

The RPT-Radio may use the Attachment 5's Form-1, Field Sampling Log, to log multiple field samples and measurements.

Assume his/her duties IAW Attachment 5, Field Monitoring Team Log.

##### 5.3 **The Onsite Field Monitoring Team(s) Should:**

Assume his/her duties IAW Attachment 9, Field Monitoring Team Responsibilities and Directions.

#### 6.0 **RECORDS**

Return completed procedure and any information or data thought to be applicable to the Emergency Preparedness Manager.

## 7.0 REFERENCES

### 7.1 References

- 7.1.1 NUREG-0654, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.
- 7.1.2 NUREG/CR-0314, An Air Sampling System for Evaluating Thyroid Dose Commitment Due to Fission Products Released for Reactor Containments.
- 7.1.3 Radiological Health Handbook (Revised Edition January 1970)
- 7.1.4 PSEG Nuclear Emergency Plan
- 7.1.5 Salem Offsite Dose Calculation Manual
- 7.1.6 Hope Creek Offsite Dose Calculation Manual

### 7.2 Cross References

- 7.2.1 NC.EP-EP.ZZ-0302(Q), Radiological Assessment Coordinator Response
- 7.2.2 NC.EP-EP.ZZ-0603(Q) Field Monitoring
- 7.2.3 NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions

## ATTACHMENT 1

Page 1 of 2

## TSC PRE - ACTIVATION CHECKLIST

DATE: \_\_\_/\_\_\_/\_\_\_

TIME: \_\_\_:\_\_\_

1.0 RPS - OFFSITE INITIAL ACTIONSNOTE

Attachment 2, RPS-Offsite Checklist may be implemented concurrently with the implementation of this procedure.

1.1 Perform the Following:

- 1.1.1 PERFORM or ASSIGN a Radiation Protection Technician (RPT) to check the dose rates in the TSC. \_\_\_\_\_
- 1.1.2 PERFORM or ASSIGN a RPT to perform habitability every 30 minutes and log habitability results in Form 1, Habitability Log. \_\_\_\_\_
- 1.1.3 COMPARE the dose rates with the habitability criteria found in Attachment 10, Onsite Protective Action Guidelines. \_\_\_\_\_
- 1.1.4 IF the evacuation limits found in Attachment 10 are exceeded, THEN notify the RAC and refer him to Attachment 4, TSC Evacuation Checklist, found in NC.EP-EP.ZZ-0302(Q). \_\_\_\_\_
- 1.1.5 OBTAIN a briefing from the SRPT concerning the Plant's radiological conditions and when the next SSCL Page 2 is due. (TIME: \_\_\_\_\_:\_\_\_\_\_) \_\_\_\_\_
- 1.1.6 OBTAIN a briefing from the RAC (or the EDO if the RAC is not available) concerning the Plant's Operational condition. \_\_\_\_\_

NOTE

An inventory of the TSC Emergency Equipment Locker is not necessary if the security seal is intact.

Refer to EP.Administration Procedure 1006, Emergency Equipment Inventory Rad Pro Equipment Checklist, if an inventory is necessary.

- 1.1.7 ENSURE the TSC emergency equipment is available and In operational condition. \_\_\_\_\_

## ATTACHMENT 1

## Page 2 of 2

1.1.8 PERFORM or ASSIGN a RPT to perform the following tasks:

**NOTE**

The TSC radiological assessment should not be generating the official Page 2 of the Station Status Checklist (SSCL) until the TSC is activated, the SRPT is informed the TSC is activated and the TSC radiological assessment personnel will be taking over the generation of the SSCL, Page2.

- Page 2 of the SSCL is being generated in preparation of taking this function over. \_\_\_\_\_
- A continuous air monitor sampler (AMS 3) is set up outside the TSC entrance. \_\_\_\_\_
- ENSURE ALL persons in the TSC have a TLD.  
Have the person(s) escorted offsite, if they don't have a TLD. \_\_\_\_\_

1.1.9 NOTIFY the RAC (or EDO if the RAC is not available) when this attachment is completed. \_\_\_\_\_

1.1.10 IF implementation of Attachment 2 has not begun,  
THEN implement Attachment 2. \_\_\_\_\_

TSC PRE-ACTIVATION CHECKLIST COMPLETED:

\_\_\_\_\_  
(TIME)

TSC ACTIVATED: \_\_\_\_\_  
(TIME)

**ATTACHMENT 2**  
**Page 1 of 2**  
**RPS-OFFSITE CHECKLIST**

Name: \_\_\_\_\_ / \_\_\_\_\_ Date/Time: \_\_\_\_ - \_\_\_\_ / \_\_\_\_ : \_\_\_\_  
(Print/Sign)

**1.0 RPS-OFFSITE**

**1.1 Should Perform The Following:**

1.1.1 INITIATE a RPS-Offsite log book. \_\_\_\_\_

1.1.2 INFORM the RAC of all changing radiological conditions. \_\_\_\_\_

**NOTE**

The keys for the emergency vehicle are located in the TSC lock box and in the Control Point key box.

1.1.3 CONTACT a Radiation Protection Technician at the Control Point and ask for the location of the emergency vehicle. \_\_\_\_\_

1.1.4 INSTRUCT a RPT to obtain current meteorological data utilizing Attachment 14, Operation of the VAX LA120 Terminal. \_\_\_\_\_

1.1.5 INSTRUCT an RPT to obtain the meteorological forecast by calling NOAA at (automotive system – 609-261-6600; options 1 & than 2) (to speak to meteorologist at Mount Holly – 609-261-6604) or by using the internet. \_\_\_\_\_

1.1.6 INSTRUCT a RPT to obtain current RMS data utilizing: \_\_\_\_\_

A. **HOPE CREEK ONLY:** Attachment 14, Operation of the VAX LA120 Terminal. \_\_\_\_\_

B. **SALEM ONLY:** NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions, for operating instructions for Salem SPDS. \_\_\_\_\_

**1.1.7 HOPE CREEK ONLY:**

REFER to Attachment 12, Hope Creek DAPA Correction Calculations, to determine if a Bias Value is needed to be used to corrected DAPA values \_\_\_\_\_

1.1.8 REQUEST the RAC to assign personnel for Onsite Field Monitoring Team members, as the need arises. \_\_\_\_\_

1.1.9 Brief Onsite Field Monitoring Teams IAW Attachment 3, Field Monitoring Team Briefing Guidance. \_\_\_\_\_

1.1.10 Brief Offsite Field Monitoring Teams IAW Attachment 3, Field Monitoring Team Briefing Guidance. \_\_\_\_\_

## ATTACHMENT 2

## Page 2 of 2

- 1.1.11 ASSIGN a RPT to be the RPT-Radio. \_\_\_\_\_
- 1.1.12 ENSURE/INSTRUCT the RPT-Radio to implement Attachment 5, Field Monitoring Team Log \_\_\_\_\_
- 1.1.13 PROVIDE the RPT – Radio instructions concerning where the Field Monitoring Teams should travel to and what type samples to take. \_\_\_\_\_
- 1.1.14 REVIEW RPT-Radio's paperwork for completeness and correctness of data being recorded periodically. \_\_\_\_\_

**NOTE**

- The HOPE CREEK Noble Gas (NG) Federal Limit/Offsite Dose Calculation manual (ODCM) Limit is  $1.20\text{E}+04$  uCi/sec.
- The SALEM Noble Gas (NG) Federal Limit/ODCM Limit is  $2.42\text{E}+05$  uCi/Sec.
- Alnors, or electronic equivalent dosimetry may be used instead of SRDs. Electronic dosimetry may be positioned throughout the TSC and SRDs, or electronic equivalent dosimetry, handed out only to people who exit the TSC.

- 1.1.15 ENSURE preparation is ongoing to log, record on Form-2 (Dosimetry Log), and handout dosimetry as required if:
- A radiological release > Federal Limits/ODCM Limits is in progress.
  - Potential of a radiological release > Federal Limits/ODCM Limits is thought to be high.
  - Dose rates in the TSC are  $\geq 2.5$  mR/hr.
  - At the discretion of the RAC.

## ATTACHMENT 3

Page 1 of 5

## FIELD MONITORING TEAM BRIEFING GUIDANCE

**NOTE**

The Onsite/Offsite Field Monitoring Teams should have the actual or a copy of the briefing form prior to being sent out to perform field monitoring.

- 1.0 **At A Minimum, The Following Items Should Be Included In The Briefing, and Recorded On Form – 1, Field Monitoring Team Briefing Form, of This Attachment:**
- 1.1 **Onsite and Offsite Field monitoring Teams Briefing Guidance**
- 1.1.1 ENSURE radio protocol is conducted in the following manner:
- Repeat backs (Three Way Communications)
  - Use of the proper phonetic alphabet, when appropriate. (A-Alpha, B-Bravo, etc.)
- 1.1.2 PROVIDE current meteorological conditions and forecast.
- 1.1.3 PROVIDE phone number to contact the TSC/EOF. This **can't** be a NETS phone.
- 1.1.4 DIRECT the Teams to use the guidance provided to them from the RPT – Radio/Field Team Coordinator concerning which monitoring locations to travel to and what type of samples to take.
- 1.1.5 PROVIDE guidance to the Onsite/Offsite Field Monitoring Teams concerning how to handle survey equipment that is contaminated with 50k ccpm. (Consideration should be given to changing out or bagging survey equipment).
- 1.1.8 ASSIGN a color name for the Onsite Field Monitoring Teams (Red Team, Blue Team, Green Team, etc.).
- 1.1.9 INSTRUCT the Teams to use Frequency 1 to contact the TSC or Frequency 4 to contact the Offsite Field Monitoring Team.



## ATTACHMENT 3

Page 2 of 5

1.2

**ONSITE FIELD MONITORING TEAM GUIDANCE:****NOTE**

1. Onsite Field Team air samples should be taken with a Low Volume air sampler if:

**SALEM ONLY:**

- The R41A effluent monitor is in range (1E-07 to 1E-01 uCi/cc).

**HOPE CREEK ONLY**

- The combined Plant vent effluent concentration is 1E-07 to 1E-01 uCi/cc

2. Onsite Field Team air samples should be taken using the marinelli emergency air sampler in accordance with NC.EP-EP ZZ-0306, Emergency Grab Air Sampling and Analysis, if:

**SALEM ONLY:**

- The R41B or R41C effluent monitors are in range ( $>1E-01$  to  $1E+05$  uCi/cc).

**HOPE CREEK ONLY**

The combined Plant vent effluent concentration is  $>1E-01$  uCi/cc.

- 1.2.1 ENSURE Onsite Field Monitoring Team understand the correct type of air sample to obtain based on Plant Vent effluent concentrations. \_\_\_\_\_
- 1.2.2 INSTRUCT the Onsite Field Monitoring Teams to implement Attachment 9, Field Monitoring Team Responsibilities and Directions. \_\_\_\_\_
- 1.2.3 DETERMINE if issuance of KI is necessary for Field Monitoring Team members by referring to NC.EP-EP.ZZ-0305(Q), Stable Iodine Thyroid Blocking, and recommendation to the RAC. \_\_\_\_\_
- 1.2.4 INSTRUCT the Onsite Field Monitoring team to read Attachment 13 and sign Attachment 13's Form-1. \_\_\_\_\_
- 1.2.5 INSTRUCT the Onsite Field Monitoring team to sign Attachment 13's Form-2 prior to going out to perform monitoring. \_\_\_\_\_

**ATTACHMENT 3**

Page 3 of 5

1.3

**Offsite Field Monitoring Team Guidance:****NOTE**

Offsite Field Monitoring Team members may obtain a briefing via radio or phone for early dispatching from the RPS-Offsite.

- 1.3.1 INSTRUCT the Offsite Field Monitoring Team members to implemented Attachment 3 of NC.EP-EP.ZZ-0603(Q). \_\_\_\_\_
- 1.3.2 INSTRUCT the teams to read and sign Attachment 10 and Form – 5, KI Side Effects/Administration Sign Off Form found in NC.EP-EP.ZZ-0603(Q). \_\_\_\_\_
- 1.3.3 ASSIGN a phonetic name for the Offsite Field Monitoring Teams (Alpha Team, Bravo Team, Charlie Team, etc,). \_\_\_\_\_
- 1.3.4 INSTRUCT the Offsite Field Monitoring Teams to implement Attachment 8, found in NC.EP-EP.ZZ-0603(Q), Field Monitoring Team Responsibilities and Directions. \_\_\_\_\_
- 1.3.5 INSTRUCT the Teams to pay, or charge on Corporate American Express card, meals and gas and then submitted for reimbursement follow one of the provisions for gas and meals listed below: \_\_\_\_\_
- 1.3.6 USE Frequency 4 to contact the EOF for the Offsite Field Monitoring Team. \_\_\_\_\_



## ATTACHMENT 3

Page 5 of 5

FORM – 1

**NOTE**

Field Monitoring Team members must be respirator qualified prior to instruction them to wear respirators.

2.1.9 Respiratory Protection Requirements: \_\_\_\_\_  
\_\_\_\_\_

2.1.10 Additional Specific Radiological Concerns: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2.1.11 Color Name for Onsite Team and Members of Team:

• Red Team: Name of Team Leader: \_\_\_\_\_

Name of Team Member: \_\_\_\_\_

• Blue Team: Name of Team Leader: \_\_\_\_\_

Name of Team Member: \_\_\_\_\_

• Green Team: Name of Team Leader: \_\_\_\_\_

Name of Team Member: \_\_\_\_\_

2.1.12 Phonetic Alphabet Name for Offsite Team and Members of Team:

• Alpha Team: Name of Team Leader: \_\_\_\_\_

Name of Team Member: \_\_\_\_\_

• Bravo Team: Name of Team Leader: \_\_\_\_\_

Name of Team Member: \_\_\_\_\_

**ATTACHMENT 4**

Page 1 of 2

**ONSITE FIELD MONITORING EQUIPMENT CHECKLIST****NOTE**

- An inventory of the Onsite Field Monitoring Team Kits is not necessary, if the kit(s)/cabinet(s) are properly sealed.
- Emergency Preparedness Procedure 1006, Emergency Equipment Inventory (Radiation Protection) should be referred to, to perform an inventory of the Emergency Locker, if necessary.
- The Forms Kit is stored in the RPS-Offsite work area.
- Lead blankets are stored adjacent to kits.
- This checklist is to be used to help ensure needed items are not left behind while loading the emergency vehicle. It is not to be used instead of the Emergency Preparedness Procedure 1006 when performing a full inventory of the Emergency Locker.

1.0 DIRECT Onsite Field Team Members to replace missing or out of service items by asking a RPT for necessary items to complete the Onsite Field Monitoring Team kit. \_\_\_\_\_

2.0 DIRECT Offsite Field Team Members to replace missing or out of service items by taking necessary items to complete the Offsite Field Monitoring Team kit from the spare supplies. \_\_\_\_\_

**EQUIPMENT/SUPPLIES CHECKLIST**

- Low Volume Air Samples: Radeco H809C with battery cable and two air sample heads, or a battery operated Radeco with two air sample heads \_\_\_\_\_
- One Count Rate Meter: E140N with a HP210 probe or equivalent meter and probe. \_\_\_\_\_
- One Ion Chamber Dose Rate Meter: RO-2 or RO-2A or equivalent meter. \_\_\_\_\_
- One Teletector or equivalent meter. \_\_\_\_\_
- One GM meter: E520 with a HP177C or 270 probe or equivalent meter and probe. \_\_\_\_\_
- Hi Range Dosimeters (0-5 R or 0-10 R) or electronic equivalent. \_\_\_\_\_
- Low Range Dosimeters (0-200 mR or 0-500mR) or electronic equivalent. \_\_\_\_\_
- One Dosimeter Charger. \_\_\_\_\_
- Absorbent Material. \_\_\_\_\_

## ATTACHMENT 4

## Page 2 of 2

- One Ten Mile (EPZ) N.J. and Delaware Map.

**NOTE**

The Forms Kit contains the Onsite Map, NC.EP-EP ZZ-0310(Q), and additional attachments from NC.EP-EP ZZ-0310(Q).

- One Onsite Map.
- One Pair of Tweezers.
- One Button Check Source.
- Silver Zeolite Cartridges.
- Box of Air Sample Filters.
- Box of Smear Papers.
- Protective Clothing/Paper Coveralls.
- Shoe Covers.
- Gloves.
- Small Envelopes for Particulate Air Sample Filters.
- Roll of Masking Tape.
- Small Plastic Bags.
- Flashlight.
- Spare Nine Volt Batteries
- Spare D Cell Batteries.
- One Bottle of KI Tablets.
- One First Aid Kit.
- Respirators.

## ATTACHMENT 5

Page 1 of 5

## FIELD MONITORING TEAM LOG

1.0 **OPERATING INSTRUCTIONS FOR TSC RAD ASSESSMENT RADIO BASE STATION**1.1 **The RPT Radio Operator Should Perform The Following:**

- 1.1.1 REQUEST Security Liaison to have Security Force Members to switch over to Frequency F2. \_\_\_\_\_
- 1.1.2 TURN on the radio power switch. The power switch is located on the top of the radio. \_\_\_\_\_
- 1.1.3 DEPRESS the F1 button located on the top of the radio to communicate with the Onsite Field Monitoring Teams or F4 to communicate with the Offsite Field Monitoring Teams. \_\_\_\_\_
- 1.1.4 POSITION the toggle switch on the left side of the radio to the forward position (on) to use the speaker or to the back position (off) to use the headset. \_\_\_\_\_
- 1.1.5 DEPRESS the button on the headset cord to transmit, if headset is in use. \_\_\_\_\_
- 1.1.6 DEPRESS the transmit bar on microphone to transmit, if headset is not in use. \_\_\_\_\_
- 1.1.7 PERFORM a radio check with the Field Team(s). \_\_\_\_\_

**NOTE**

Use this Attachment to assist in performing necessary calculations and document briefing updates.

Form-1, Field Sampling Form, of this attachment may be used to log multiple field samples and measurements.

Onsite/Offsite Field Monitoring Team's dose should be tracked on Form-2, Dosimetry Log.

2.0 **ONSITE DATA**2.1 **The RPT – Radio Operator OR Designee Should Record The Following, As Applicable:**

- 2.1.1 RPT - Radio: Name : \_\_\_\_\_ Date : \_\_\_\_\_
- 2.1.2 Team Color Code: \_\_\_\_\_ Time: \_\_\_\_\_
- 2.1.3 Location : \_\_\_\_\_

## ATTACHMENT 5

## Page 2 of 5

- 2.1.4 Instrument Type/Serial Number: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
2.1.5 General Area Open Window Dose Rate : \_\_\_\_\_mR/hr  
2.1.6 General Area Closed Window Dose Rate : \_\_\_\_\_mR/hr  
2.1.7 Ground Open Window Dose Rate : \_\_\_\_\_mR/hr  
2.1.8 Ground Closed Window Dose Rate : \_\_\_\_\_mR/hr  
2.1.9 Time On For A/S : \_\_\_\_\_ Time Off For A/S : \_\_\_\_\_  
2.1.10 Average Flow Rate : \_\_\_\_\_cfm  
2.1.11 Particulate Background : \_\_\_\_\_cpm  
2.1.12 Particulate Sample : \_\_\_\_\_cpm  
2.1.13 Iodine Background : \_\_\_\_\_cpm  
2.1.14 Iodine Sample : \_\_\_\_\_cpm  
2.1.15 Refer to section 3.0 for offsite data that should be obtained.  
2.1.16 Refer to section 5.0 for onsite data calculations.

**3.0 OFFSITE DATA****3.1 The RPT – Radio Operator OR Designee Should Record The Following, If Applicable:**

- 3.1.1 Team Phonetic Alphabet Name: \_\_\_\_\_ Time: \_\_\_\_\_  
3.1.2 Location : \_\_\_\_\_  
\_\_\_\_\_  
3.1.3 Instrument Type/Serial Number: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
3.1.4 General Area Open Window Dose Rate : \_\_\_\_\_mR/hr  
3.1.5 General Area Closed Window Dose Rate : \_\_\_\_\_mR/hr  
3.1.6 Ground Open Window Dose Rate : \_\_\_\_\_mR/hr  
3.1.7 Ground Closed Window Dose Rate : \_\_\_\_\_mR/hr  
3.1.8 Time On For A/S : \_\_\_\_\_ Time Off For A/S : \_\_\_\_\_  
3.1.9 Average Flow Rate : \_\_\_\_\_cfm  
3.1.10 Particulate Background : \_\_\_\_\_cpm



## ATTACHMENT 5

Page 3 of 5

3.1.11 Particulate Sample : \_\_\_\_\_ cpm

3.1.12 Iodine Background : \_\_\_\_\_ cpm

3.1.13 Iodine Sample : \_\_\_\_\_ cpm

3.1.14 Refer to section 6.0 for offsite data calculations.

**4.0 BRIEFING UPDATE****4.1 The RPT – Radio Operator OR Designee Should Record The Following:**

4.1.1 Time : \_\_\_\_\_ Event Classification : \_\_\_\_\_

4.1.2 Plant Conditions : \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_4.1.3 Radiological Conditions : \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_4.1.4 Additional Information Communicated to Offsite Team (Attach additional pages as necessary):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_**5.0 ONSITE CALCULATIONS****5.1 The RPT – Radio Operator OR Designee Should Record The Following:**5.1.1 Person Performing Calculations : \_\_\_\_\_ / \_\_\_\_\_ Date: \_\_\_\_\_  
(Print/Sign)

5.1.2 Go to Section 2.0 of Attachment 5 for data to perform calculations.

5.1.3 Subtract 2.1.6 \_\_\_\_\_ from 2.1.5 \_\_\_\_\_ and Multiply that value by the beta correction factor of 5 for the mRad/hr : \_\_\_\_\_ mRad/hr.  
(Gen. Area)5.1.4 Subtract 2.1.8. \_\_\_\_\_ from 2.1.7 \_\_\_\_\_ and multiply that value by the beta correction factor of 5 for the mRad/Hr. : \_\_\_\_\_  
mRad/hr. (Ground)

## ATTACHMENT 5

## Page 4 of 5

- 5.1.5 Subtract 2.1.11 \_\_\_\_\_ from 2.1.12 \_\_\_\_\_ for the corrected counts per minute (ccpm) for particulate samples : \_\_\_\_\_ ccpm.
- 5.1.6 Calculate the particulate uCi/cc IAW Attachment 6, Air Activity vs. Count Rate Table, or IAW Attachment 7, Air Activity vs. Dose Rate Table, \_\_\_\_\_ uCi/cc.
- 5.1.7 Subtract 2.1.13 \_\_\_\_\_ from 2.1.14 \_\_\_\_\_ for the corrected counts per minute (ccpm) for iodine samples : \_\_\_\_\_ ccpm.
- 5.1.8 Calculate the iodine uCi/cc IAW Attachment 8, Direct Conversion Per Minute to uCi/cc for I-131 : \_\_\_\_\_ uCi/cc.

**6.0 OFFSITE CALCULATIONS****6.1 The RPT – Radio Operator OR Designee Should Record The Following:**

- 6.1.1 Person Performing Calculations : \_\_\_\_\_ / \_\_\_\_\_ Date: \_\_\_\_\_  
(Print/Sign)
- 6.1.2 Go to section 3.0 of Attachment 5 for data to perform calculations.
- 6.1.3 Subtract 3.1.5. \_\_\_\_\_ from 3.1.4 \_\_\_\_\_ and Multiply that value by the beta correction factor of 5 for the mRad/hr : \_\_\_\_\_ mRad/hr.  
(Gen. Area)
- 6.1.4 Subtract 3.1.7 \_\_\_\_\_ from 3.1.6 \_\_\_\_\_ and multiply that value by the beta correction factor of 5 for the mRad/hr. : \_\_\_\_\_ mRad/hr.  
(Ground)
- 6.1.5 Subtract 3.1.10 \_\_\_\_\_ from 3.1.11 \_\_\_\_\_ for the corrected counts per minute (ccpm) for particulate samples : \_\_\_\_\_ ccpm.
- 6.1.6 Calculate the particulate uCi/cc IAW Attachment 6, Air Activity vs. Count Rate Table, or IAW Attachment 7, Air Activity vs. Dose Rate Table, \_\_\_\_\_ uCi/cc.
- 6.1.7 Subtract 3.1.12 \_\_\_\_\_ from 3.1.13 \_\_\_\_\_ for the corrected counts per minute (ccpm) for iodine samples : \_\_\_\_\_ ccpm.
- 6.1.8 Calculate the iodine uCi/cc IAW Attachment 8, Direct Conversion Per Minute to uCi/cc for I-131 : \_\_\_\_\_ uCi/cc.

## ATTACHMENT 5

Page 5 of 5

FORM – 1

## FIELD SAMPLING FORM

DATE/ TIME	TEAM NAME	LOCATION	OPEN WINDOW GRD (mR/hr)	CLOSED WINDOW GRD (mR/hr)	OPEN WINDOW GA (mR/hr)	CLOSED WINDOW GA (mR/hr)	CART. READING (ccpm)	PART. READING (ccpm)

## ATTACHMENT 6

Page 1 of 1

PARTICULATE AIR ACTIVITY VS. COUNT RATE TABLE

CORRECTED CPM	SAMPLE VOLUME 5 (CUBIC FT.)	SAMPLE VOLUME 10 (CUBIC FT.)	SAMPLE VOLUME 15 (CUBIC FT.)	SAMPLE VOLUME 20 (CUBIC FT.)	SAMPLE VOLUME 25 (CUBIC FT.)	SAMPLE VOLUME 30 (CUBIC FT.)
(ccpm)	(uCi/cc)	(uCi/cc)	(uCi/cc)	(uCi/cc)	(uCi/cc)	(uCi/cc)
5.00E+04	1.59E-06	7.95E-07	5.30E-07	3.97E-07	3.18E-07	2.65E-07
4.50E+04	1.43E-06	7.15E-07	4.77E-07	3.57E-07	2.86E-07	2.38E-07
4.00E+04	1.27E-06	6.35E-07	4.23E-07	3.17E-07	2.54E-07	2.12E-07
3.50E+04	1.11E-06	5.55E-07	3.70E-07	2.77E-07	2.22E-07	1.85E-07
3.00E+04	9.53E-07	4.76E-07	3.18E-07	2.38E-07	1.91E-07	1.59E-07
2.50E+04	7.94E-07	3.97E-07	2.65E-07	1.98E-07	1.59E-07	1.32E-07
2.00E+04	6.35E-07	3.17E-07	2.12E-07	1.59E-07	1.27E-07	1.06E-07
1.50E+04	4.77E-07	2.38E-07	1.59E-07	1.19E-07	9.54E-08	7.95E-08
1.00E+04	3.18E-07	1.59E-07	1.06E-07	7.95E-08	6.36E-08	5.30E-08
9.00E+03	2.86E-07	1.43E-07	9.53E-08	7.15E-08	5.72E-08	4.77E-08
8.00E+03	2.54E-07	1.27E-07	8.47E-08	6.35E-08	5.08E-08	4.23E-08
7.00E+03	2.22E-07	1.11E-07	7.40E-08	5.55E-08	4.44E-08	3.70E-08
6.00E+03	1.91E-07	9.55E-08	6.37E-08	4.77E-08	3.82E-08	3.18E-08
5.00E+03	1.59E-07	7.95E-08	5.30E-08	3.97E-08	3.18E-08	2.65E-08
4.00E+03	1.27E-07	6.35E-08	4.23E-08	3.17E-08	2.54E-08	2.12E-08
3.00E+03	9.53E-08	4.76E-08	3.18E-08	2.38E-08	1.91E-08	1.59E-08
2.00E+03	6.35E-08	3.17E-08	2.12E-08	1.59E-08	1.27E-08	1.06E-08
1.00E+03	3.18E-08	1.59E-08	1.06E-08	7.95E-09	6.39E-09	5.30E-09
9.00E+02	2.86E-08	1.43E-08	9.53E-09	7.15E-09	5.72E-09	4.77E-09
8.00E+02	2.54E-08	1.27E-08	8.47E-09	6.35E-09	5.08E-09	4.23E-09
7.00E+02	2.22E-08	1.11E-08	7.40E-09	5.55E-09	4.44E-09	3.70E-09
6.00E+02	1.91E-08	9.55E-09	6.37E-09	4.77E-09	3.82E-09	3.18E-09
5.00E+02	1.59E-08	7.95E-09	5.30E-09	3.97E-09	3.18E-09	2.65E-09
4.00E+02	1.27E-08	6.35E-09	4.23E-09	3.17E-09	2.54E-09	2.12E-09
3.00E+02	9.53E-09	4.76E-09	3.18E-09	2.38E-09	1.91E-09	1.59E-09
2.00E+02	6.35E-09	3.17E-09	2.12E-09	1.59E-09	1.27E-09	1.06E-09
1.00E+02	3.18E-09	1.59E-09	1.06E-09	7.95E-10	6.36E-10	5.30E-10

Calculation Based on:  $\text{uCi/cc} = \frac{\text{ccpm} * 4.5\text{E-}07 \text{ uCi/dpm}}{\text{VOL (FT}^3\text{)} * 2.832\text{E+}4 \text{ (CC/FT}^3\text{)} * \text{EFF (0.10)}}$

## ATTACHMENT 7

Page 1 of 1

## PARTICULATE AIR ACTIVITY VS. DOSE RATE TABLE

	SAMPLE VOLUME 5 (CUBIC FT.)	SAMPLE VOLUME 10 (CUBIC FT.)	SAMPLE VOLUME 15 (CUBIC FT.)	SAMPLE VOLUME 20 (CUBIC FT.)	SAMPLE VOLUME 25 (CUBIC FT.)	SAMPLE VOLUME 30 (CUBIC FT.)
(mRad/hr)	(uCi/cc)	(uCi/cc)	(uCi/cc)	(uCi/cc)	(uCi/cc)	(uCi/cc)
1.00E+03	1.59E-06	7.95E-07	5.30E-07	3.97E-07	3.18E-07	2.65E-07
5.00E+02	1.43E-06	7.15E-07	4.77E-07	3.57E-07	2.86E-07	2.38E-07
1.00E+02	1.27E-06	6.35E-07	4.23E-07	3.17E-07	2.54E-07	2.12E-07
9.50E+01	1.11E-06	5.55E-07	3.70E-07	2.77E-07	2.22E-07	1.85E-07
9.00E+01	9.53E-07	4.76E-07	3.18E-07	2.38E-07	1.91E-07	1.59E-07
8.50E+01	7.94E-07	3.97E-07	2.65E-07	1.98E-07	1.59E-07	1.32E-07
8.00E+01	6.35E-07	3.17E-07	2.12E-07	1.59E-07	1.27E-07	1.06E-07
7.50E+01	4.77E-07	2.38E-07	1.59E-07	1.19E-07	9.54E-08	7.95E-08
7.00E+01	3.18E-07	1.59E-07	1.06E-07	7.95E-08	6.36E-08	5.30E-08
6.50E+01	2.86E-07	1.43E-07	9.53E-08	7.15E-08	5.72E-08	4.77E-08
6.00E+01	2.54E-07	1.27E-07	8.47E-08	6.35E-08	5.08E-08	4.23E-08
5.50E+01	2.22E-07	1.11E-07	7.40E-08	5.55E-08	4.44E-08	3.70E-08
5.00E+01	1.91E-07	9.55E-08	6.37E-08	4.77E-08	3.82E-08	3.18E-08
4.50E+01	1.59E-07	7.95E-08	5.30E-08	3.97E-08	3.18E-08	2.65E-08
4.00E+01	1.27E-07	6.35E-08	4.23E-08	3.17E-08	2.54E-08	2.12E-08
3.50E+01	9.53E-08	4.76E-08	3.18E-08	2.38E-08	1.91E-08	1.59E-08
3.00E+01	6.35E-08	3.17E-08	2.12E-08	1.59E-08	1.27E-08	1.06E-08
2.50E+01	3.18E-08	1.59E-08	1.06E-08	7.95E-09	6.39E-09	5.30E-09
2.00E+01	2.86E-08	1.43E-08	9.53E-09	7.15E-09	5.72E-09	4.77E-09
1.50E+01	2.54E-08	1.27E-08	8.47E-09	6.35E-09	5.08E-09	4.23E-09
1.00E+01	2.22E-08	1.11E-08	7.40E-09	5.55E-09	4.44E-09	3.70E-09
5.00E+00	1.91E-08	9.55E-09	6.37E-09	4.77E-09	3.82E-09	3.18E-09
1.00E+00	1.59E-08	7.95E-09	5.30E-09	3.97E-09	3.18E-09	2.65E-09

Calculation Based on:

(1 mRad/hr. = 5000 ccpm)

$$\text{uCi/cc} = \frac{\text{ccpm} * 4.5\text{E-}07 \text{ uCi/dpm}}{\text{VOL (FT}^3\text{)} * 2.832\text{E+}4 \text{ (CC/FT}^3\text{)} * \text{EFF (0.10)}}$$

## ATTACHMENT 8

Page 1 of 1

## DIRECT CONVERSION TABLE OF CORRECTED COUNTS PER MIN. TO uCi/cc I-131

ccpm	uCi/cc	THYROID COMMITTED DOSE EQUIVALENT (mRem/INHALATION hr)
1.13E+01	1.00E-08	1.30E+01
2.26E+01	2.00E-08	2.60E+01
5.65E+01	5.00E-08	6.50E+01
7.92E+01	7.00E-08	9.10E+01
1.13E+02	1.00E-07	1.30E+02
2.26E+02	2.00E-07	2.60E+02
5.65E+02	5.00E-07	6.50E+02
7.92E+02	7.00E-07	9.10E+02
1.13E+03	1.00E-06	1.30E+03
2.26E+03	2.00E-06	2.60E+03
5.65E+03	5.00E-06	6.50E+03
7.92E+03	7.00E-06	9.10E+03
1.13E+04	1.00E-05	1.30E+04
2.26E+04	2.00E-05	2.60E+04
3.40E+04	3.00E-05	3.90E+04
4.53E+04	4.00E-05	5.20E+04

EQUATIONS:

$$\frac{\text{corrected counts per minute (ccpm)}}{(\text{detector efficiency})(\text{collection efficiency})(\text{conversion factor - dpm to uCi})(\text{volume - cubic ft})(\text{conversion factor - cc to cubic ft})}$$

WHERE:

2.00E-03 ccpm/dpm = DETECTOR EFFICIENCY  
 90% (0.90) = COLLECTION EFFICIENCY  
 2.22E+06 dpm/uCi = CONVERSION FACTOR  
 10 Cubic Feet = VOLUME  
 2.832E+04 cc to Cubic Feet = CONVERSION FACTOR

uCi/cc \* Dose Rate Conversion Factor (DRCF) = mRem/Inhalation hr.

WHERE:

1.30E+09 mRem/uCi/cc/hr = Dose Rate Conversion Factor (DRCF) from EPA 400

## ATTACHMENT 9

Page 1 of 3

## FIELD MONITORING TEAM RESPONSIBILITIES AND DIRECTIONS

1.0 RESPONSIBILITIES1.1 The Field Monitoring Team Should Perform The Following:

- 1.1.1 RECEIVE a briefing from the RPS-Offsite \_\_\_\_\_
- 1.1.2 OBTAIN the Forms Kit briefcase from RPS-Offsite. \_\_\_\_\_
- 1.1.3 CHECK seals on Field Monitoring Kits. Perform an inventory of kits in accordance with Emergency Preparedness Procedure 1006, if seal is broken. \_\_\_\_\_

**NOTE**

A satisfactory response check would be an upscale response on the Count Rate or Dose Rate instrument, when the instrument is on the lowest scale.

- 1.1.4 PERFORM response checks on instruments and replace batteries or instrument, if necessary. \_\_\_\_\_
- 1.1.5 SIGN on to appropriate Radiation Work Permit and ensure SRDs, are zeroed, if used, and electronic dosimeter is set at 80% of 4500 mRem minus current year to date dose. \_\_\_\_\_
- 1.1.6 LOAD the Onsite Field Monitoring Team Kits into the emergency vehicle using Attachment 4, Onsite Field Monitoring Equipment Checklist, to help ensure needed items are not left behind \_\_\_\_\_
- 1.1.7 PERFORM a radio and a telephone check from the emergency vehicle: \_\_\_\_\_
  - SET the radio on Frequency: \_\_\_\_\_
    - 1 to contact the Onsite Field Monitoring Team(s) \_\_\_\_\_
    - 4 to contact the Offsite Field Monitoring Team(s). \_\_\_\_\_
- 1.1.8 INFORM the RPS-Offsite if the emergency vehicle's gas gauge indicates less than 1/2 full, prior to going into the field or at any time while in the field. \_\_\_\_\_

## ATTACHMENT 9

## PAGE 2 OF 3

1.1.9 REPLENISH Onsite Field Monitoring Team Kits to ensure kits are kept in a ready mode IAW NC.EP-AP.ZZ- 1006, Emergency Preparedness Inventory Radiation Protection at the end of a:

- Drill \_\_\_\_\_
- Exercise \_\_\_\_\_
- Declared Emergency \_\_\_\_\_

1.1.10 PERFORM response checks on instruments used. \_\_\_\_\_

1.1.11 IF instrument(s) fail a response check, THEN INFORM RPS-Offsite. \_\_\_\_\_

2.0 DIRECTIONS2.1 The Field Monitoring Team Should Perform The Following:NOTE

The Onsite Field Monitoring Team should provide input to the RPS-Offsite, as necessary, concerning unusual plant conditions observed, sampling results, and moving to other than assigned locations due to changing radiological or meteorological conditions.

The Onsite Field Monitoring Team members should report conflicting radiological or meteorological conditions to the RPS-Offsite, AS SOON AS POSSIBLE.

2.1.1 ENSURE air samples taken using a low volume air sampler should be a total of 10 cubic feet taken at a flow rate not to exceed 2 cfm unless otherwise directed by the RPS-Offsite. \_\_\_\_\_

2.1.2 PURGE iodine cartridges in low background area outside the plume after collecting the sample. \_\_\_\_\_

2.1.3 ENSURE open and closed window readings are taken at every sampling location. \_\_\_\_\_

2.1.4 CONTACT with the RPT-Radio should be maintained at least every 30 minutes. \_\_\_\_\_

2.1.5 MAINTAIN contamination controls whenever handling air samples. \_\_\_\_\_

2.1.6 STORE all samples in back area of emergency vehicle, unless otherwise directed by the RPS-Offsite. \_\_\_\_\_



**ATTACHMENT 9**

**Page 3 of 3**

- 2.1.7 COVER all samples reading 100 mR/hr. or greater on contact with a lead blanket and contact the RPS - Offsite immediately. \_\_\_\_\_
- 2.1.8 MONITOR dose rates and check dosimetry upon exiting the plume. \_\_\_\_\_
- 2.1.9 FRISK and SURVEY appropriate equipment, as time allows, after exiting the plume to ensure contamination levels are below 50k ccpm smearable contamination. \_\_\_\_\_
- 2.1.10 CONTACT RPS-Offsite for further directions on what to do with equipment if contamination levels are 50k ccpm or greater smearable contamination. \_\_\_\_\_
- 2.1.11 REFER to Attachment 11, Onsite Emergency Monitoring Locations, for the Onsite Monitoring Locations, if necessary. \_\_\_\_\_
- 2.1.12 OBTAIN a copy of Attachment 9 (Offsite Emergency Monitoring Locations) from NC.EP-EP.ZZ-0603(Q) (Field Monitoring), for the Offsite Monitoring Locations, if required. \_\_\_\_\_

## ATTACHMENT 10

Page 1 of 1

## ONSITE PROTECTIVE ACTION GUIDELINES

1.0 RADIATION LEVELS

Dose Rate (mR/hr) ≥ 100	Location Onsite	Action Evacuation of all nonessential personnel. Consider evacuation of other personnel.
Dose Rate (mR/hr) ≥ 100	Location Control Room OSC TSC Control Point	Action Consider evacuation within one hour, and/or relocation as appropriate.
Dose Rate (mR/hr) ≥ 1000	Location Onsite	Action Evacuation of all nonessential personnel Consider immediate evacuation of remaining personnel.
Dose Rate (mR/hr) ≥ 1000	Location Control Room OSC TSC Control Point	Action Consider immediate evacuation, and/or relocation upwind of the plume.

2.0 RADIOIODINE

If the Iodine-131 equivalent is calculated or measured in concentrations greater than or equal to  $5.0E - 07$  uCi/cc, consider the use of Potassium Iodide for thyroid blocking. This section is to be applied to areas, in which personnel are working or are planning to work. Refer to Emergency Procedure NC.EP-EP.ZZ-0305(Q), Stable Iodine Thyroid Blocking, for additional information.

## ATTACHMENT 11

Page 1 of 3

## ONSITE EMERGENCY MONITORING LOCATIONS

DESIGNATION	LOCATION DESCRIPTION
A-7	Northeast corner of circulating water intake structure.
A-1	End of pier by heli-pad.
B-6	Halfway between north end of circulating water intake and service water intake structure.
C-7	West Corner of "B" Building
B-10	By heli-pad.
B-12	Adjacent to Jet Fuel Storage Tank on wooded fence.
D-5	North of service water structure on security fence.
C-5	Northeast corner of service water structure.
C-6	Chemistry trailer.
C-8	Along sidewalk, 150' north of Unit #1 Guardhouse (at Hose Station).
D-11	Southeast corner of SNGS switchyard, on security fence.
D-4	Security access road, due west of midway between the two Containment Buildings, west of south end of "A" Building.
D-6	On wall of Salem Unit #1 Fuel Handling Building, opposite R-45 shed.
D-7	Closest outside entrance to the Control Point (next to Unit #1 steam mixing bottle).
D-8	Southeast corner of SNGS Cafeteria.
E-4	Northwest corner of security road at right angle (inside fence).
E-6	On wall of Salem Unit #2 Fuel Handling Building, opposite R-45 shed.
E-7	Between Salem Unit #2 Containment Building and Unit #2 Turbine Building.
F-7	Northwest corner of SNGS Unit #2 Turbine Building.
E-8	Northeast corner of SNGS Administration Building

## ATTACHMENT 11

## Page 2 of 3

F-11	Inside site security fence at northeast corner of SNGS switchyard.
F-5	Adjacent to First Aid Trailer.
F-8	Inner Access Road, northeast intersection.
G-7	Adjacent to SE Corner of USNRC Trailer.
G-8	SNGS South Fence Vehicle Access Gate.
G-9	Southwest corner SNGS #2 Warehouse.
H-3	Near the fence between Salem and Hope Creek south of Radwaste Storage Facility.
H-4	Chemical Waste Holding Basin. Near the fence between Salem and Hope Creek 500' northwest of Salem Chemical Waste Holding Basin.
H-5	Near the fence between Salem and Hope Creek near the 907 Building
H-6	Near the fence between Salem and Hope Creek northeast of 906 Building.
H-7	200' West of Security Center.
H-8	Behind Security Center.
I-2	West of Radwaste Storage Facility on lamp post.
I-4	Southwest corner of Hope Creek Reactor Building.
I-6	Hope Creek Unit #1 Turbine Building (Southeast corner of Turbine Building).
I-7	On Hope Creek security fence, 100' east of Southeast corner of Turbine Building.
J-1	Hope Creek Intake Structure.
K-4	Northwest corner of Hope U/2 Reactor Building (Abandoned).
K-6	Northeast corner of Hope Creek Turbine Building.
K-7	On security fence, east of northeast corner of Turbine Building.

ATTACHMENT 11

Page 3 of 3

- K-1 West of Material Center inside security Fence on lamppost.
- L-6 100' southeast of Hope Creek Auxiliary Boiler Building.
- M-1 Northwest corner of Hope Creek Security fence.
- M-2 Adjacent to Hope Creek Sewerage Treatment facility (Outside Protected Area).
- M-3 Inside Hope Creek security fence, 500' east of corner of fence.
- M-4 Inside Hope Creek security fence, 100' northwest of fire water tank.
- M-5 Inside Hope Creek security fence, North of Aux Boiler House.
- N-6 Southwest of Hope Creek Cooling Tower. (Outside Protected Area).
- O-1 Along Hope Creek security fence near fuel oil storage tank (Outside Protected Area).
- N-5 Along Hope Creek security fence near Circ. Water Building (Outside Protected Area).
- O-0 Northwest corner of Hope Creek site, near Cooling Tower Blowdown Outfall Instrument Shelter (Outside Protected Area).

## ATTACHMENT 12

Page 1 of 3

## HOPE CREEK DAPA CORRECTION CALCULATIONS

NOTE**"THIS ATTACHMENT IS FOR USE FOR HOPE CREEK ONLY!"**

1. DAPA temperature is located on the VAX LA120, Operation Status Board (EOF Menu Selection "2").
2. No correction to the DAPA Monitor is required below 245 degrees Fahrenheit (F).

## 1.0 DAPA CORRECTION CALCULATIONS

## 1.1 To Correct For DAPA High Temperature, Perform The Following:

- 1.1.1 REFER to Figure 1 of this attachment (Attachment 12).
- 1.1.2 IF the uncorrected DAPA reading lies below the curve (in the lined region), THEN the DAPA Monitor value is unreliable and should **NOT** be used at all.
- 1.1.3 PROCEED to Step 1.1.4, IF the uncorrected DAPA reading lies above the curve (above the lined region).
- 1.1.4 REFER to Figure 2 of this attachment (Attachment 12).
- 1.1.5 DETERMINE a BIAS value to add to the uncorrected DAPA reading by finding the value on the curve that corresponds to the associated average Drywell Air Temperature.

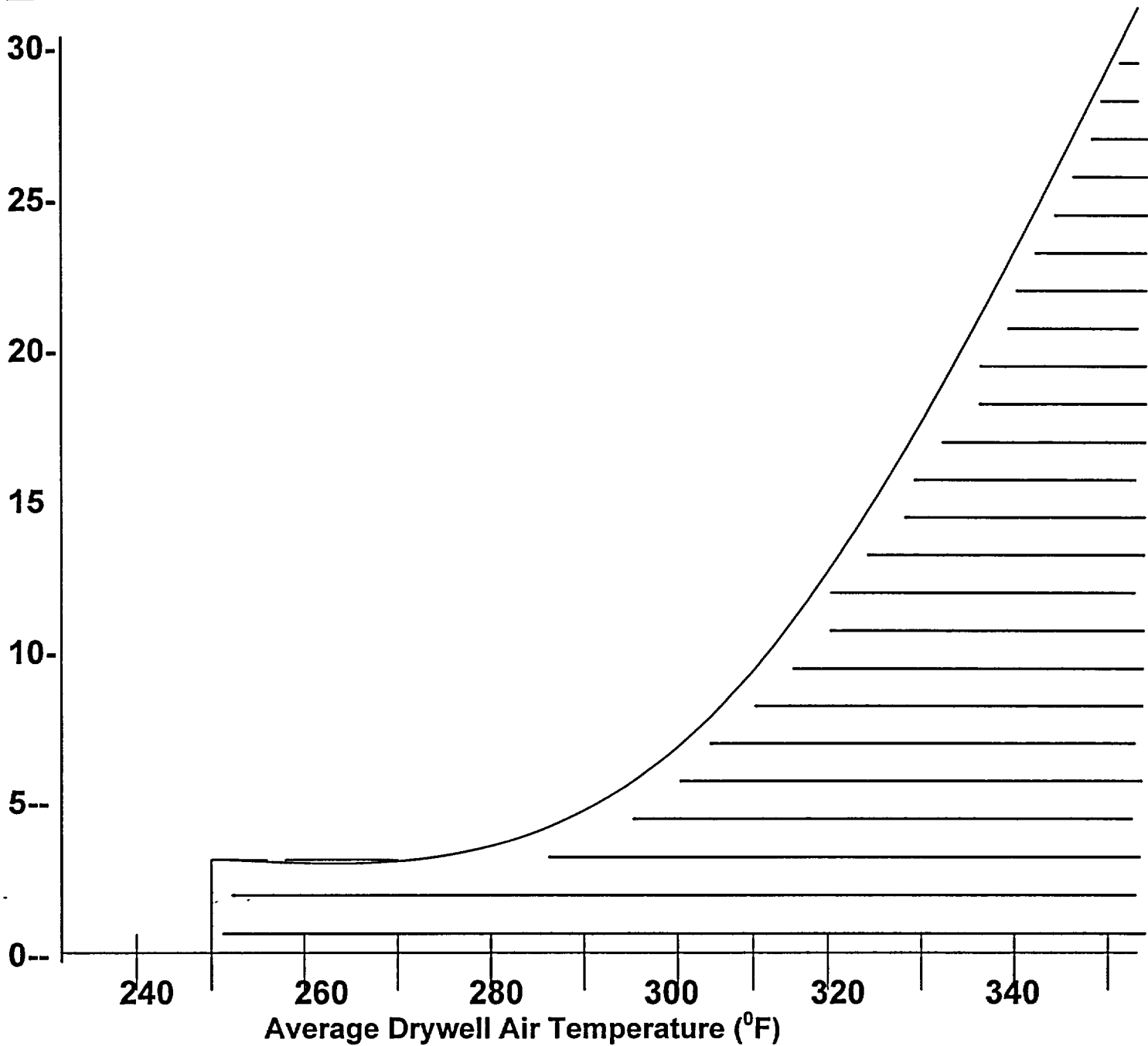
$$\begin{array}{rcl}
 \text{DAPA Monitor} & + & \text{Bias Value} \\
 \text{Reading (R/hr)} & & \text{Reading (R/hr)} \\
 \hline
 & = & \text{Corrected DAPA} \\
 & & \text{Reading (R/hr)}
 \end{array}$$

## ATTACHMENT 12

Page 2 of 3

FIGURE 1

DAPA MONITOR READING vs AVERAGE DRYWELL AIR TEMPERATURE

DAPA MONITOR READING (R/hr)

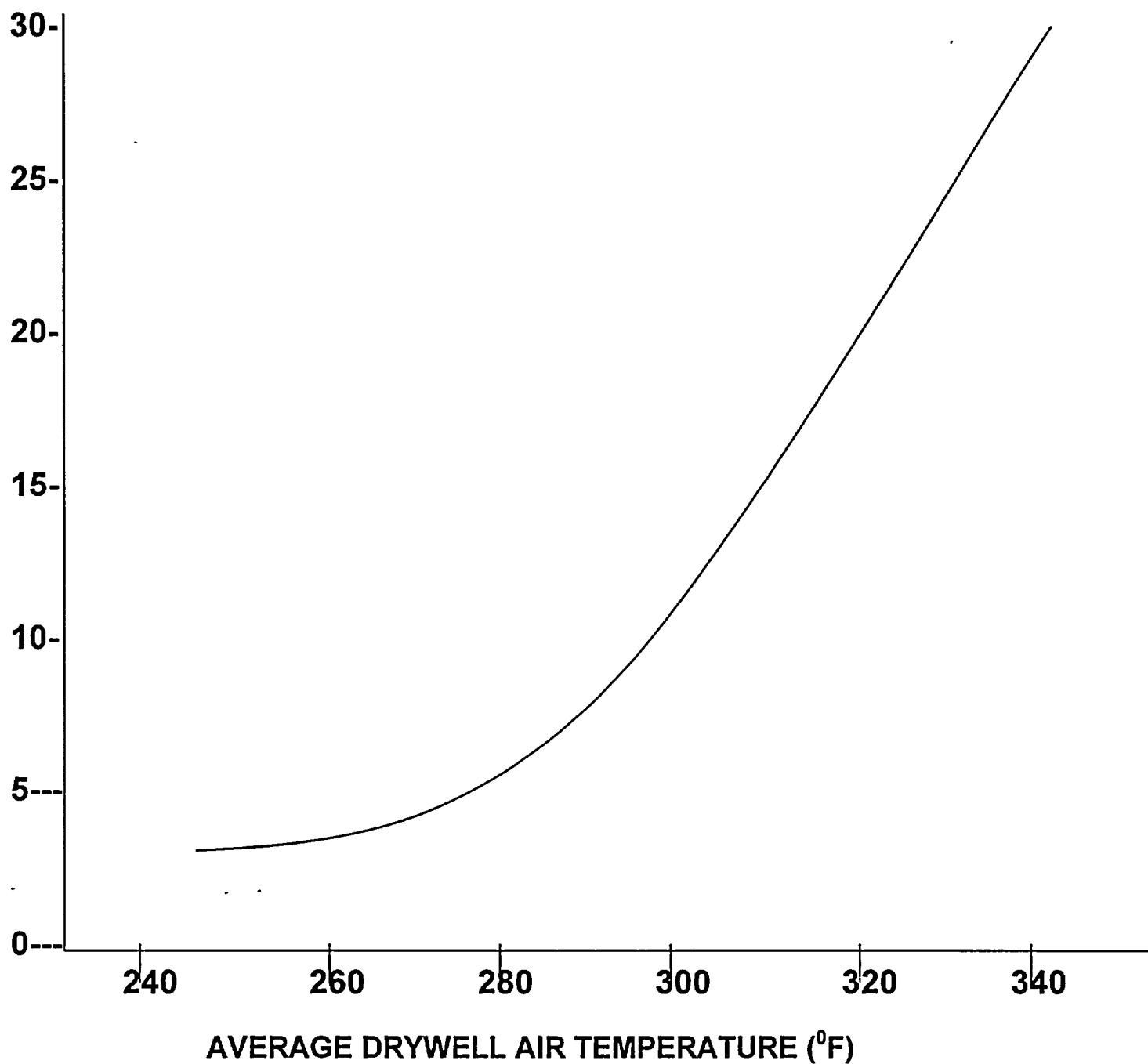
Lined area indicates DAPA Monitor value at which alternate method for determining estimate of Drywell airborne radiation levels should be used.

## ATTACHMENT 12

Page 3 of 3

FIGURE 2

DAPA MONITOR READING BIAS vs AVERAGE DRYWELL AIR TEMPERATURE

DAPA MONITOR READING BIAS (R/hr)



## ATTACHMENT 13

Page 1 of 4

## PACKAGE INSERT FOR THYRO-BLOCK TABLETS

1.0 HOW POTASSIUM IODIDE WORKS

- Certain forms of iodine help your thyroid gland work right. Most people get the iodine they need from foods, like iodized salt or fish. The thyroid can "store" or hold only a certain amount of iodine.
- In a radiation emergency, radioactive iodine may be released in the air. This material may be breathed or swallowed. It may enter the thyroid gland and damage it. The damage would probably not show itself for years. Children are most likely to have thyroid damage.
- If you take potassium iodide, it will fill your thyroid gland. This reduces the chance that harmful radioactive iodine will enter the thyroid gland.

2.0 WHO SHOULD NOT TAKE POTASSIUM IODIDE**NOTE**

You may take potassium iodide if you are taking medicine for a thyroid problem (for example, a thyroid hormone or anti-thyroid drug). Pregnant and nursing women, babies and children may also take potassium iodide.

2.1 People who should not take potassium iodide are:

- People who are allergic to iodine.
- People with kidney problems.
- Persons on certain high blood pressure medications (ACE Inhibitors).

3.0 HOW AND WHEN TO TAKE POTASSIUM IODIDE

Potassium Iodide should be taken as soon as possible after public health officials tell you. You should take one dose every 24 hours. More will not help you because the thyroid can "hold" only limited amounts of iodine. Larger doses will increase the risk of side effects. You will probably be told not to take the drug for more than ten days.

4.0 SIDE EFFECTS

- Usually, side effects of potassium iodide happen when people take higher doses for a long time. You should be careful not to take more than the recommended dose or take it for longer than you are told. Side effects are unlikely because of the low dose and the short time you will be taking the drug.

**ATTACHMENT 13****Page 2 of 4**

- Possible side effects include skin rashes, swelling of the salivary glands, and "iodine" (metallic taste, burning mouth and throat, sore teeth and gums, symptoms of a head cold, and some times stomach upset and diarrhea).
- A few people have an allergic reaction with more serious symptoms. These could be fever and joint pains, or swelling of parts of the face and body and at times severe shortness of breath requiring immediate medical attention.
- Taking iodine may rarely cause overactivity of the thyroid gland, underactivity of the thyroid gland or enlargement of the thyroid gland (goiter).

**5.0 WHAT TO DO IF SIDE EFFECTS OCCUR**

If the side effects are severe or if you have an allergic reaction, stop taking potassium iodide and call a doctor.

## ATTACHMENT 13

Page 3 of 4

FORM – 1

## KI SIDE EFFECTS/ADMINISTRATION SIGN OFF FORM

AUTHORIZED BY: \_\_\_\_\_

ADMINISTERED BY: \_\_\_\_\_

My signature indicates that I have read and understand Attachment 13 Package Insert  
For Thyroid Blocking Tablets.

PRINT NAME	SOCIAL SEC. NO.	INDIVIDUAL'S SIGNATURE	DATE/TIME	COMMENTS

## ATTACHMENT 13

Page 4 of 4

FORM – 2

NAME OF INDIVIDUAL	SOCIAL SEC. NO.	KI DOSAGE	AUTHORIZED BY DATE/TIME	ADMINISTERED BY DATE/TIME	COMMENTS

## ATTACHMENT 14

Page 1 of 3

## OPERATION OF THE VAX LA120 TERMINAL

1.0 METEOROLOGICAL DATA1.1 Perform The Following to Obtain Current 15 Minute Average Meteorological Data:

1.1.1 DEPRESS the RETURN key. (USERNAME should be displayed). \_\_\_\_\_

1.1.2 ENTER(Type In ) M E T and depress the RETURN key \_\_\_\_\_

**NOTE**

The most current meteorological data should be printed out followed by the Main Meteorological Menu. If no other keys are depressed, the current 15 minute average data will be printed out every 15 minutes.

**SALEM ONLY**

Meteorological data may be obtained from Salem SPDS IAW NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.

- SELECT **Option 3** (Disable Automatic Display of MET Data Every 15 minutes) and depress the RETURN key to stop the VAX LA120 from printing out meteorological data every 15 minutes. \_\_\_\_\_
- SELECT **Option 1** (Display Current Meteorological Data) and depress the RETURN key to receive the current 15 meteorological data print out. \_\_\_\_\_

1.2 Perform The Following Steps to Obtain Archived Meteorological Data:

1.2.1 DEPRESS the RETURN key. (USERNAME should be displayed) \_\_\_\_\_

1.2.2 ENTER M E T and depress the RETURN key. (The most current meteorological data should be printed out followed by the Main Meteorological Menu). \_\_\_\_\_

**ATTACHMENT 14****Page 2 of 3**

- 1.2.3 **SELECT Option 2** (Display Meteorological Data From Data Base) and depress the **RETURN** key. (Current system Date and Time will be displayed). \_\_\_\_\_
- 1.2.4 IF this is the data you want, THEN depress the **RETURN** key. (Your option will be printed out). \_\_\_\_\_
- 1.2.5 IF you want data from an another date and time, THEN go to Step 1.2.6. \_\_\_\_\_
- 1.2.6 **ENTER** start date and time as shown below and depress the **RETURN** key. (For December 27, 1989 at 0130 enter 27-DEC-1989 "depress the space bar once" and enter 01:30). \_\_\_\_\_
- 1.2.7 **ENTER** "Y" if the information is correct or "N" if the information is not correct and reenter it as shown in Step 1.2.6. \_\_\_\_\_
- 1.2.8 **ENTER** the end date and time as shown below and depress the **RETURN** key. (For December 28, 1989 at 0230 enter 28-DEC-1989 "depress the space bar once" and enter 02:30). \_\_\_\_\_
- 1.2.9 **ENTER** "Y" if the information is correct or "N" if the information is not correct and re-enter it as shown in Step 1.2.8. \_\_\_\_\_

**2.0 RMS AND MET DATA (FOR HOPE CREEK ONLY)****2.1 Perform The Following Steps to Obtain Current Instantaneous RMS and MET Data:**

- 2.1.1 **DEPRESS** the **RETURN** key. (USERNAME should be displayed). \_\_\_\_\_
- 2.1.2 **ENTER** (Type In) **E O F** and depress the **RETURN** key. (A prompt should be displayed asking for PASSWORD). \_\_\_\_\_

## ATTACHMENT 14

## Page 3 of 3

- 2.1.3 ENTER the letters **E O F U S E R** and depress the **RETURN** key.  
(The EOF Plant Menu should be displayed.) \_\_\_\_\_
- 2.1.4 SELECT **Option 1** for Hope Creek. \_\_\_\_\_
- 2.1.5 DEPRESS the **RETURN** key. (The EOF Report Options Menu  
will be displayed). \_\_\_\_\_
- 2.1.6 SELECT **Option 1** (Current RMS Status) and depress the  
**RETURN** key. (The most current instantaneous RMS and 15  
minute MET data will be printed out.) \_\_\_\_\_
- 2.2 **Perform The Following Steps to Obtain 15 Minute Average RMS Data:**
- 2.2.1 DEPRESS the **RETURN** key. (USERNAME should be  
displayed). \_\_\_\_\_
- 2.2.2 ENTER **E O F** and depress the **RETURN** key. (A prompt should  
be displayed asking for PASSWORD). \_\_\_\_\_
- 2.2.3 ENTER **E O F U S E R** and depress the **RETURN** key. (The EOF  
Plant Menu should be displayed). \_\_\_\_\_
- 2.2.4 SELECT **Option 1** for Hope Creek. \_\_\_\_\_
- 2.2.5 DEPRESS the **RETURN** key. (The EOF Report Options Menu  
should be displayed). \_\_\_\_\_
- 2.2.6 SELECT **Option 6** (15 Minute Historical Data). (Current system  
date and time should be displayed. A prompt should be  
displayed for start date and time) \_\_\_\_\_
- 2.2.7 DEPRESS the **RETURN** key for 15 minute average RMS and  
MET data. (Your selection will be printed). \_\_\_\_\_

## FORM – 1

Page 1 of 1

## HABITABILITY LOG

DATE:

LOCATION	TIME	DOSE RATE (mR/hr)	CONTAMINATION (CPM)	INITIALS

IF other means are used to ensure habitability, THEN list: \_\_\_\_\_

---

---

---



## FORM – 2

Page 1 of 1

## DOSIMETRY LOG

NAME	DOSIMETER NUMBER	ISSUED DATE	RTN DATE	INITIAL VALUE (mRem)	END VALUE (mRem)	TOTAL DOSE (mRem)


NC.EP-EP.ZZ-0313 (Q) Rev. 02

**ADVANCED DOSE ASSESSMENT (MIDAS) INSTRUCTIONS****USE CATEGORY: II****PSE&G****CONTROL****COPY #** EPIPO59**REVISION SUMMARY:**

1. This revision satisfies the requirement for a biennial review.
2. Deleted Attachment 2, Instructions For Salem SPDS Displays. This was replaced NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.
3. Deleted Form – 1, SPDS RMS Log. Form – 1 now is in NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.
4. Added cross reference NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.
5. Revised the third bullet in the note after Section 5.0 to reference NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.
6. Revised the seventh bullet in step 5.1.8 to reference NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.

**IMPLEMENTATION REQUIREMENTS**Procedure Implementation Date: 10/4/02

APPROVED: \_\_\_\_\_

  
Emergency Preparedness Manager9/19/02  
Date

APPROVED: \_\_\_\_\_

N/A  
Vice President - OperationsN/A  
Date

## TABLE OF CONTENTS

Section	Title	Page
1.0	PURPOSE.....	2
2.0	PREREQUISITES .....	2
2.1	Prerequisites To Be Followed Prior To Implementing This Procedure .....	2
3.0	PRECAUTIONS AND LIMITATIONS .....	2
3.1	Precaution and Limitations To Be Followed Prior To Implementing This Procedure .....	2
4.0	EQUIPMENT REQUIRED .....	3
5.0	PROCEDURE .....	3
5.1	Sign-on Instructions For MIDAS .....	3
5.2	Perform the Following to Produce a SSCL Page 2 Using Back Calculation Dose Assessment Mode.....	4
5.3	The Following Steps Should be Performed to Calculate Liquid Release Dose Assessment For Swimmers .....	8
5.4	The Following Steps Should be Performed to Calculate Dose Assessment Using DAPA Values (Leakage From The Drywell).....	10
5.5	Perform the Following to Produce a SSCL Page 2 Using Default Dose Assessment .....	12
5.6	Perform the Following to Produce a SSCL Page 2 Using Default Dose Assessment Based On NUREG 1228.....	20
6.0	RECORDS .....	28
7.0	REFERENCES.....	28
7.1	References .....	28
7.2	Cross References.....	28
ATTACHMENTS		
Attachment 1	Operating Instructions For VAX LA120 Terminal .....	29
TABLES		
TABLE 1 - 1 Drywell Rate Nomogram .....		32
TABLE 1 - 2 Xu/Q Values for Elevated Releases at Hope Creek.....		33
TABLE 1 - 3 Xu/Q Values for Ground Releases at Hope Creek.....		34

## 1.0 PURPOSE

This procedure provides guidance and operating instructions concerning performing advanced dose assessment using the dose assessment program MIDAS.

## 2.0 PREREQUISITES

### 2.1 Prerequisites to be Followed Prior to Implementing This Procedure

Implement this procedure:

- Upon the declaration of an Unusual Event or higher emergency classification.
- At the request of the Operation Superintendent (OS).
- At the request of the Emergency Duty Officer (EDO).
- At the request of the Radiation Protection Duty Supervisor (RPDS) or Shift Radiation Protection Technician (SRPT).

## 3.0 PRECAUTIONS AND LIMITATIONS

### 3.1 Precautions and Limitations to be Followed Prior to Implementing this Procedure:

- 3.1.1 It is recommended that initials be used in the place keeping sign-offs, instead of checkmarks, if more than one person may implement this procedure.
- 3.1.2 Steps in this procedure may be performed in the order deemed appropriate for the emergency situation. Only steps that are applicable to the specific MIDAS dose assessment mode of operation that is being performed need be followed.
- 3.1.3 Personnel who implement this procedure shall be trained and qualified IAW the Emergency Plan.
- 3.1.4 This procedure is limited to performance of advanced dose assessment calculations [**Dose Assessment Based On Back Calculation, Liquid Release (Swimmers), DAPA Values , Default UFSAR, and Default NUREG 1228 Modes**] and instructions on manipulation of map screens, including printing out of map screens.

#### 4.0 EQUIPMENT REQUIRED

Necessary equipment is provided in the Emergency Response Facilities.

#### 5.0 PROCEDURE

##### NOTE

- Dose Assessment should be performed using 10 or 15-minute average RMS and Meteorological data, unless circumstances in step 5.1.1 are met.
- Attachment 1, Operation of the VAX LA120 Terminal, should be referred to for operational directions for the VAX LA120.
- NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions, should be referred to for operational directions for the radiological SPDS screens.

#### 5.1 Sign-on Instructions For MIDAS

- 5.1.1 DEPRESS the **POWER** button. (The Microsoft Windows NT Screen will appear with a Begin Logon box displayed. The command inside the box will read, Press Ctrl + Alt + Delete to logon). \_\_\_\_\_
- 5.1.2 DEPRESS the **Ctrl, Alt, Delete** keys simultaneously. (The Logon Information box will be displayed with lines to enter User name and Password). \_\_\_\_\_
- 5.1.3 INPUT **midas** into the User name line. \_\_\_\_\_
- 5.1.4 INPUT **midas** into the Password line and depress the **RETURN** key. \_\_\_\_\_
- 5.1.5 POSITION the cursor on the **Midas** Icon and click the mouse twice. (The MIDAS unit selection screen will be displayed). \_\_\_\_\_
- 5.1.6 POSITION the mouse cursor + over the box of your selection (**Hope Creek, Salem Unit 1, or Salem Unit 2**) and click the mouse once. (Your selection will become highlighted). \_\_\_\_\_
- 5.1.7 POSITION the cursor over the **CONFIRM** box and click the mouse once. (The Function Selection screen will appear). \_\_\_\_\_
- 5.1.8 SELECT the appropriate Section for type of dose assessment mode from list below:

- Refer to **Section 5.2** to perform Dose Assessment **Using Back Calculation**.
- Refer to **Section 5.3** to perform Dose Assessment for **Swimmers based on a Liquid Release**.
- Refer to **Section 5.4** to perform Dose Assessment from **DAPA Values**.
- Refer to **Section 5.5** to perform "What If" Dose Assessment calculations using **Default** mode.
- Refer to **Section 5.6** to perform "What If" Dose Assessment calculations using **Default 1228** mode.
- Refer to **Attachment 1** for **Operating Instructions for the VAX LA120 Terminal**.
- Refer to **NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions**, for Operating Instructions for **SALEM SPDS Radiological Screens**.

**5.2 PERFORM THE FOLLOWING TO PRODUCE A SSCL PAGE 2 USING THE BACK CALCULATION DOSE ASSESSMENT MODE**

### NOTE

- Back Calculation Dose Assessment should be used if dose assessment values are needed based on onsite or offsite field team meter results.
- While performing Back Calculation and the following appears on the screen:  
**NO RESPONSE FROM DADIS - HOPE CREEK TO DADIS  
DATA COLLECTION FROM DADIS WAS TERMINATED  
ENTER OPTION: [YE] TRY DATA COLLECTION AGAIN  
[NO] PROCEED WITH MANUAL ENTRY**

Respond in the following manner: Choose NO and proceed with following the steps listed in section 5.2 of this procedure.

- 5.2.1 POSITION the cursor over the **ACCIDENT DOSE CALCULATIONS (AC)** box and **CLICK** the mouse once. (Your selection will become highlighted).
- 5.2.2 POSITION the cursor over the **CONFIRM** box and **CLICK** the mouse once. (Your selection will become highlighted and the Accident Dose Calculations (AC) screen will appear).

- 5.2.3 POSITION the cursor over the **FIELD TEAM STRAIGHT LINE (MENU E)** box and CLICK the mouse once. The box will become highlighted. \_\_\_\_\_
- 5.2.4 POSITION the cursor over the **CONFIRM** box and CLICK the Mouse once. (The Field Monitoring Parameter Selection screen will then appear). \_\_\_\_\_
- 5.2.5 POSITION the cursor over the **RESET** box and CLICK the mouse once. (The highlighted boxes will now be cleared and data may now be inputted). \_\_\_\_\_
- 5.2.6 POSITION the cursor over the **GROUND** box and CLICK the mouse once. (The box will become highlighted) \_\_\_\_\_
- 5.2.7 POSITION the cursor over the **FIELD MONITOR READING (MR/HR)** box and CLICK the mouse once. (The box will become highlighted and a pop-up screen will appear in the upper right side of the screen). \_\_\_\_\_

**NOTE**

The corrected open window value should be used in step 5.2.8. (Subtract Closed Window value from Open Window value and multiply the answer by 5).

- 5.2.8 POSITION the cursor over the **appropriate number(s)** you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). \_\_\_\_\_
- 5.2.9 POSITION the cursor over the **EN** box and CLICK the mouse once. (The value selected will be displayed in the FIELD MONITOR READING box). \_\_\_\_\_
- 5.2.10 POSITION the cursor over the **DISTANCE FROM THE PLANT (MILES)** box and CLICK the mouse once. (The box will become highlighted and a pop-up screen will appear in the upper right side of the screen). \_\_\_\_\_
- 5.2.11 POSITION the cursor over the **appropriate number(s)** you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). \_\_\_\_\_

5.2.12 POSITION the cursor over the **EN** box and **CLICK** the mouse once. (The value selected will be displayed in the FIELD MONITOR READING box).

---

5.2.13 POSITION the cursor over the **SILVER ZEOLITE (CPM)** box and **CLICK** the mouse once. (The box will become highlighted and a pop-up screen will appear in the upper right side of the screen).

---

**NOTE**

The corrected counts per minute value should be used in step 5.2.14. (Subtract Background value from Total Counts Per Minute value.)

5.2.14 POSITION the cursor over the **appropriate number(s)** you wish to enter and **CLICK** the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen).

---

5.2.15 POSITION the cursor over the **EN** box and **CLICK** the mouse once. (The value selected will be displayed in the FIELD MONITOR READING box).

---

5.2.16 POSITION the cursor over the **CONFIRM** box and **CLICK** the mouse once. IF the calculating screen appears, THEN MIDAS is starting to perform dose assessment calculations. The SSCL will automatically printout and the 10 mile TEDE 4-DAY map will appear on the screen.

---

5.2.17 IF the Meteorological Spread Sheet screen appears, THEN input **appropriate meteorological values**.

---

5.2.18 POSITION the cursor to the **CONTINUE** box on the bottom of the screen and **CLICK** the mouse once. (The NEXT REPORT box will replace the CONTINUE box).

---

5.2.19 POSITION the cursor over the **NEXT REPORT** box and **CLICK** the mouse once. (The MORE REPORTS box will replace the NEXT REPORT box).

---

5.2.20 POSITION the cursor over the **MORE REPORTS** box and **CLICK** the mouse once. (The More Reports Selection screen will appear).

---



**NOTE**

- Step 5.2.21 provides instructions for utilizing the SSCL Box to print a SSCL to the screen, if the printer is malfunctioning.
- Step 5.2.21 provides instructions for utilizing the SSCL Box to print an additional SSCL.
- A blank SSCL page 2 can be found in ECG Attachment 8 or obtained from Communicator 2.

5.2.21 IF a SSCL needs be printed to the screen or an additional SSCL printed out, THEN:

- POSITION the cursor over the **SSCL** Box and **CLICK** the mouse once. \_\_\_\_\_
- POSITION the cursor over the **CONFIRM** box and **CLICK** the mouse once. (The SSCL will be printed to the screen, and if the printer is functioning, an additional SSCL will be printed out). \_\_\_\_\_

5.2.22 POSITION the cursor over the **EXIT** box and **CLICK** the mouse once. (The EXIT box will become highlighted). \_\_\_\_\_

5.2.23 **CLICK** the mouse again. (The Function Selection screen will appear). \_\_\_\_\_

5.2.24 IF another dose assessment calculation and SSCL is needed, THEN REPEAT steps 5.2.1 through 5.2.23. \_\_\_\_\_

5.2.25 IF you need to exit the MIDAS program, THEN:

- POSITION the cursor over the **EXIT** box and click the mouse twice. (The Unit Selection screen will appear). \_\_\_\_\_
- POSITION the cursor over the **EXIT** box, click the mouse twice. \_\_\_\_\_

5.3 The Following Steps Should Be Performed To Calculate Liquid Release Dose Assessment For Swimmers

NOTE

Liquid Release Dose Assessment for Swimmers should be performed IAW Section 5.3 of this procedure.

5.3.1 PERFORM the following to perform dose assessment for swimmers.

- A. OBTAIN the gross liquid release activity from chemistry and record the value in Space A. \_\_\_\_\_
- B. SELECT the Dose Rate Conversion Factor from below. \_\_\_\_\_

Gamma External Dose Equivalent =  $1.44\text{E-}06$  mRem/hr/pCi/l  
Beta/Gamma Skin Dose Equivalent =  $1.72\text{E-}06$  mRem/hr/pCi/l

- C. RECORD the value in Space D. \_\_\_\_\_
- D. OBTAIN the exposure time. \_\_\_\_\_
- E. RECORD in Space E. \_\_\_\_\_

NOTE

- The average yearly dilution factor for routine releases is  $1.00\text{E-}03$ .
- The default dilution factor is  $1.00\text{E+}00$  and should be used if the dilution factor is unknown.

- F. OBTAIN the dilution factor from chemistry or use the default value.
- G. RECORD value in Space F.

- H. MULTIPPLY the value in Space A by the value in Space B. (The value calculated will be the total concentration of the liquid release).
- I. RECORD the value in space C.
- J. MULTIPLY the values from Spaces C, D, E and F to (The calculated value will be the External Dose Equivalent (EDE) dose).
- K. RECORD the value in Space G.

$$\begin{array}{l} \text{A.} \underline{\hspace{2cm}} \\ \text{Gross Liquid} \\ \text{Activity (uCi/ml)} \end{array} * \begin{array}{l} \text{B. } 1.00\text{E}+09 \\ \text{Conversion Factor} \end{array} = \begin{array}{l} \text{C.} \underline{\hspace{2cm}} \\ \text{Total Concentration} \\ \text{(pCi/l)} \end{array}$$

$$\begin{array}{l} \text{D.} \underline{\hspace{2cm}} \\ \text{DRCF} \\ \text{(mRem/hr/pCi/l)} \end{array} * \begin{array}{l} \text{E.} \underline{\hspace{2cm}} \\ \text{Exposure Time} \end{array} * \begin{array}{l} \text{F.} \underline{\hspace{2cm}} \\ \text{Dilution Factor} \\ \text{(Hours)} \end{array}$$

$$\begin{array}{l} \text{G.} \underline{\hspace{2cm}} \\ \text{EDE in mRem} \end{array}$$

5.4 **The Following Steps Should Be Performed To Calculate Dose Assessment DAPA Values (Leakage From The Drywell)**

**NOTE**

Section 5.4 of this procedure is for **HOPE CREEK ONLY** and should be used to perform **Leakage from the Drywell** Dose Assessment using DAPA Values.

- 5.4.1 OBTAIN the DAPA "A" or "B" monitor value (which ever one is the highest) and record this value on the horizontal axis of Table 1 – 1, Drywell (Primary Containment) High Range Monitor Response (DAPA) R/hr. \_\_\_\_\_
- 5.4.2 MULTIPLY the leak rate in uCi/sec by 1.00E-03 to obtain percent of Drywell Leakage. [The leak rate in uCi/sec may be obtained from the RM-11 or the VAX LA120. IF the Reactor Building Ventilation hasn't been isolated, THEN use 9RX580 (FRVS Effluent Monitor Reading)]. [IF the Reactor Building Ventilation has been isolated, THEN use 9RX680 (SPV Effluent Monitor Reading)]. \_\_\_\_\_
- 5.4.3 RECORD the percent of Drywell Leakage on Table 1-1 by choosing the most appropriate diagonal line. (100% 2 hrs, 100%, 10%, 1.0%, 0.5%, or 0.1%) \_\_\_\_\_
- 5.4.4 LOCATE where the DAPA monitor value and the percent leakage intersect on Table 1 - 1. \_\_\_\_\_
- 5.4.5 DRAW a line from this point of intersection to Scale "A" titled Release Rate (uCi/sec). \_\_\_\_\_
- 5.4.6 PERFORM the following steps to determine the X/Q value on Scale "B":
- A. DIVIDE the wind speed (mph) by 2.24 to obtain the wind speed in m/sec. \_\_\_\_\_
  - B. RECORD the wind speed in the wind speed blank (Step 5.4.7). \_\_\_\_\_
  - C. REFER to Table 1 - 2 for an elevated release
- OR**
- REFER to Table 1 - 3 for a ground release and locate the specific distance of interest. \_\_\_\_\_

- D. FOLLOW the appropriate table over to the right to the current Stability Class. \_\_\_\_\_
- E. MULTIPLY this value by 1.00E-06. \_\_\_\_\_
- F. RECORD the value in the Xu/Q blank (Step 5.4.7). \_\_\_\_\_
- G. DIVIDE the Xu/Q value by the wind speed in m/sec. and record the value in the X/Q blank. \_\_\_\_\_

5.4.7 LOCATE the approximate X/Q value on Scale "B" and plot the value. \_\_\_\_\_

$$\frac{1}{Xu/Q / \text{wind speed (m/sec)}} = \frac{1}{X/Q}$$

5.4.8 DRAW a straight line from the point of interest on Scale "A" to the X/Q value located on Scale "B". \_\_\_\_\_

5.4.9 CONTINUE TO DRAW the line to the point of intersection on Scale "C". \_\_\_\_\_

5.4.10 DETERMINE by interpolation the approximate value of the intercept point on Scale "C". (This is the projected external dose equivalent (EDE) offsite dose rate in mRem/hr). \_\_\_\_\_

5.4.11 MULTIPLY this value by four to obtain a four-hour projected EDE dose. \_\_\_\_\_

**NOTE**

The TEDE + 4 to EDE Correction Factor is 1.

5.4.12 MULTIPLY the EDE dose by 1 to obtain the four-hour projected TEDE dose. \_\_\_\_\_

## 5.5 Perform The Following To Produce A SSCL Page 2 Using Default Dose Assessment Mode

### NOTE

While performing "WHAT IF" DEFAULT dose assessment calculations, the Following appears on the screen:

**NO RESPONSE FROM DADIS – (HOPE CREEK/SALEM) TO DADIS  
DATA COLLECTION FROM DADIS WAS TERMINATED  
ENTER OPTION [YE] TRY DATA COLLECTION AGAIN  
[NO] PROCEED WITH MANUAL ENTRY**

Respond in the following manner:

Choose NO and proceed with Section 5.5 of this procedure.

Section 5.5 of this procedure should be used to perform "WHAT IF" DEFAULT dose assessment calculations and should NOT be used for event classifications or protective action recommendations.

- 5.5.1 POSITION the cursor over the **ACCIDENT DOSE CALCULATIONS (AC)** box and **CLICK** the mouse once. (Your selection will become highlighted). \_\_\_\_\_
- 5.5.2 POSITION the cursor over the **CONFIRM** box and **CLICK** the mouse once. (Your selection will become highlighted and the Accident Dose Calculations (AC) screen will appear). \_\_\_\_\_
- 5.5.3 POSITION the cursor over **ADVANCED CALCS ALL SCREENS (MENU X)** and **CLICK** the mouse once. (Your selection will become highlighted). \_\_\_\_\_
- 5.5.4 POSITION the cursor over the **CONFIRM** box and **CLICK** the mouse once. (The box will become highlighted. MIDAS will attempt to collect automatic data . The Miscellaneous Parameters screen will then appear). \_\_\_\_\_
- 5.5.5 PERFROM the following to highlight appropriate selections:
  - A. POSITION the cursor over the **RESET** box and **CLICK** the mouse. No boxes will now be highlighted. \_\_\_\_\_
  - B. POSITION the cursor over the **MANUAL** box and **CLICK** the mouse once. \_\_\_\_\_

- C. POSITION the cursor over the appropriate **RELEASE POINT(S)** and **CLICK** the mouse once. (The box will become highlighted). \_\_\_\_\_
- D. POSITION the cursor over the **FLOW EX VEL (CFM)** box for the release point chosen and **CLICK** the mouse once. (A pop-up screen will appear). \_\_\_\_\_
- E. INPUT the exit velocity flow rate using the pop-up screen by positioning the cursor over the **correct value(s)** and **CLICKING** the mouse once. \_\_\_\_\_
- **Exit Velocity For HOPE CREEK:** ZERO (0) for all REL PTs.
  - **Exit Velocity For SALEM:** ZERO (0) for REL PTs. 1 and 4
  - **Exit Velocity For SALEM:** 95 for REL PT 2
- F. INPUT the exit velocity flow rate using the pop-up screen by positioning the cursor over the **correct Value(s)**, selected from above, and **CLICKING** the mouse once. \_\_\_\_\_
- G. POSITION the cursor over the **EN** box when the appropriate values are inputted and **CLICK** the mouse once. (The box will become highlighted with the flow rate inside the box). \_\_\_\_\_
- H. POSITION the cursor over the **MAX DIST DOWNWIND (MILES)** box and **CLICK** the mouse once. A pop-up screen will appear. \_\_\_\_\_
- I. INPUT **10** using the pop-up screen. \_\_\_\_\_
- J. POSITION the cursor over the **EN** box and **CLICK** the mouse once. (The box will become highlighted with 10 appearing inside the box). \_\_\_\_\_
- 5.5.6 POSITION the cursor over the **AUTO SCENARIO INTEGRATION** box and **CLICK** the mouse once. (The box will become highlighted). \_\_\_\_\_
- 5.5.7 POSITION the cursor over the **CONFIRM** box and **CLICK** the mouse once. (The box will become highlighted and Run Mode and Integration screen will appear). \_\_\_\_\_

- 5.5.8 POSITION the cursor over the **PROJECTED (FORECAST) DOSE** box. \_\_\_\_\_
- 5.5.9 IF the **PROJECTED (FORECAST) DOSE** is highlighted, THEN GO to step 5.5.11. \_\_\_\_\_
- 5.5.10 IF the **PROJECTED (FORECAST) DOSE** box is not highlighted, THEN place the cursor on the box and **CLICK** the mouse once. \_\_\_\_\_
- 5.5.11 POSITION the cursor over the **START DATE INTEG. CURRENT** Box and **CLICK** the mouse once. \_\_\_\_\_
- 5.5.12 IF the **PROJ. TIMES (HRS)** box DOES have .25, 1, 4, 24 inside of the box and is highlighted, THEN go to Step 5.5.14. \_\_\_\_\_
- 5.5.13 IF the **PROJ. TIMES (HRS)** box DOESN'T have .25, 1, 4, 24 inside of box, THEN POSITION the cursor over the **PROJ. TIMES (HRS)** box and **CLICK** the mouse once. (A pop-up screen will appear in the upper right of the screen). \_\_\_\_\_
- A. INPUT .25, 1, 4, 24 using the pop-up screen. \_\_\_\_\_
- B. POSITION the cursor over the **EN** box and **CLICK** the mouse once. \_\_\_\_\_
- 5.5.14 POSITION the cursor over the **CONFIRM** box and **CLICK** the mouse once. (The box will become highlighted and the Release Option Selection screen will appear). \_\_\_\_\_
- 5.5.15 POSITION the cursor over the **DEFAULT DBA ACCIDENT** box and **CLICK** the mouse once. (The box will become highlighted). \_\_\_\_\_
- 5.5.16 POSITION the cursor over the **CONFIRM** box and **CLICK** the mouse once. (The Design Basis Accident Selection screen for the release point selected will appear). \_\_\_\_\_
- 5.5.17 POSITION the cursor over the **appropriate accident** and **CLICK** the mouse once. (The box will become highlighted) \_\_\_\_\_
- 5.5.18 POSITION the cursor over the **appropriate selection(s)** and **CLICK** the mouse once. (The Release Timing Selection screen will appear). \_\_\_\_\_



5.5.19 POSITION the cursor over the **TRIP CURRENT TIME** box and CLICK the mouse once. \_\_\_\_\_

5.5.20 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The box will become highlighted and the Release Option Selection screen will appear). \_\_\_\_\_

5.5.21 POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (**DO NOT ENTER ANY VALUES IN THE DURATION OR REMAINING DURATION BOXES.** The Weather Selection screen will appear). \_\_\_\_\_

5.5.22 PERFORM the following steps to input meteorological data :

**NOTE**

The user will **NOT** be prompted for the **SPD33P (MPH)** if the release is an elevated release.

- A. POSITION the cursor over the **SPD33P (MPH)** box and CLICK the mouse once to input the 33 foot elevation wind speed. \_\_\_\_\_
- B. POSITION the cursor over the **appropriate number(s)** you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). \_\_\_\_\_
- C. MOVE the cursor over the **EN** box and CLICK the mouse once. [The value chosen will be displayed in specific weather parameter box that is being inputted (i.e. SPD33P MPH)]. \_\_\_\_\_

**NOTE**

The user will **NOT** be prompted for the **SPD300 (MPH)** if the release is a ground release.

- D. POSITION the cursor over the **SPD300 (MPH)** box and CLICK the mouse once to input the 300 foot elevation wind speed. \_\_\_\_\_

- E. POSITION the cursor over the **appropriate number(s)** you wish to enter and **CLICK** the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). \_\_\_\_\_
- F. MOVE the cursor over the **EN** box and **CLICK** the mouse once. (The value chosen will be displayed in specific weather parameter box). \_\_\_\_\_

**NOTE**

The Default Value of one (1.0) should be used for DT300, if the delta t data is not available. This will produce an "E" stability class.

- G. POSITION the cursor over the **DT300 (DEG.C)** box and **CLICK** the mouse once to input the 300 - 33 foot delta temperature. (The box will become highlighted). \_\_\_\_\_
- H. POSITION the cursor over the **appropriate number(s)** you wish to enter and **CLICK** the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). \_\_\_\_\_
- I. MOVE the cursor over the **EN** box and **CLICK** the mouse once. (The value chosen will be displayed in specific weather parameter box). \_\_\_\_\_

**NOTE**

MIDAS does not use ambient temperature value. Twenty (20) degrees should be used for ambient temperature.

- J. POSITION the cursor over the **TEMP33 (DEG.C)** box and **CLICK** the mouse once to input the ambient temperature. (The box will become highlighted). \_\_\_\_\_
- K. POSITION the cursor over the appropriate number **20** and **CLICK** the mouse once. (The number 20 will be displayed in the top portion of the pop-up screen). \_\_\_\_\_
- L. MOVE the cursor over the **EN** box and **CLICK** the mouse once. (The value chosen will be displayed in specific weather parameter box). \_\_\_\_\_

- M. POSITION the cursor over the **DIR33P (DEG.C)** box and **CLICK** the mouse once to input the 33 foot wind direction. (The box will become highlighted). \_\_\_\_\_
- N. POSITION the cursor over the **appropriate number(s)** you wish to enter and **CLICK** the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). \_\_\_\_\_
- O. MOVE the cursor over the **EN** box and **CLICK** the mouse once. (The value chosen will be displayed in specific weather parameter box). \_\_\_\_\_
- P. POSITION the cursor over the **RAIN (INCHES)** box and **CLICK** the mouse once to input the 15 minute average precipitation. (The box will become highlighted). \_\_\_\_\_

**NOTE**

The following values of values may be inputted if actual rainfall data is not known:

- 0.08 = (Heavy Rainfall)
- 0.02 = (Moderate Rainfall)
- 0.01 = (Light Rainfall)
- The number Zero "0" if it is not raining.

- Q. POSITION the cursor over the **appropriate number(s)** You wish to enter and **CLICK** the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). \_\_\_\_\_
- R. MOVE the cursor over the **EN** box and **CLICK** the mouse once. (The value chosen will be displayed in specific weather parameter box). \_\_\_\_\_

**NOTE**

The **PCT CLOUD COVER REQUIRES SPEED, USE LAST MET DATE**, and **USE DEFAULT MET** boxes should **NOT** be used.

S. POSITION the cursor over **CONFIRM** box and CLICK the mouse once. (The Rad Monitoring Channel screen will appear).

5.5.23 POSITION the cursor over the **CONTINUE** box and CLICK the mouse once. (The box will become highlighted and Release Point Data screen will appear).

5.5.24 POSITION the cursor over the **CONTINUE** box and CLICK the mouse once. (The box will become highlighted and the Summary of Meteorological Data screen will appear).

5.5.25 POSITION the cursor over **CONTINUE** box and CLICK the mouse once. (The calculating screen will appear, while PC MIDAS performs dose assessment calculations. The SSCL will automatically printout and the 10 mile TEDE 4-DAY map will appear on the screen after the calculations are finished).

5.5.26 POSITION the cursor to the **CONTINUE** box on the bottom of the screen and CLICK the mouse once. (The NEXT REPORT box will replace the CONTINUE box).

5.5.27 POSITION the cursor over the **NEXT REPORT** box and CLICK the mouse once. (The MORE REPORTS box will replace the NEXT REPORT box).

5.5.28 POSITION the cursor over the **MORE REPORTS** box and CLICK the mouse once. (The More Reports Selection screen will appear).

#### NOTE

- Step 5.5.29 provides instructions for utilizing the SSCL Box to print a SSCL to the screen, if the printer is malfunctioning.
- Step 5.5.29 provides instructions for utilizing the SSCL Box to print an additional SSCL.
- A blank SSCL page 2 can be found in ECG Attachment 8 or obtained from Communicator 2.

5.5.29 IF a SSCL needs be printed to the screen or another SSCL printed out, THEN:

A. POSITION the cursor over the **SSCL** Box and CLICK the mouse once. \_\_\_\_\_

B. POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The SSCL will be printed to the screen, and if the printer is functioning, another SSCL will be printed out). \_\_\_\_\_

5.5.30 POSITION the cursor over the **EXIT** box and CLICK the Mouse once. (The EXIT box will become highlighted). \_\_\_\_\_

5.5.31 CLICK the mouse again. (The Function Selection screen will appear). \_\_\_\_\_

5.5.32 IF another dose assessment calculation and SSCL is needed, THEN REPEAT steps 5.5.1 through 5.5.30. \_\_\_\_\_

5.5.33 IF you need to exit the MIDAS program, THEN:

A. POSITION the cursor over the **EXIT** box and click the mouse twice. (The Unit Selection screen will appear). \_\_\_\_\_

B. POSITION the cursor over the **EXIT** box, click the mouse twice. \_\_\_\_\_

- While performing NUREG 1228 “WHAT IF” DEFAULT dose assessment calculations, the following appears on the screen:  
**NO RESPONSE FROM DADIS – (HOPE CREEK/SALEM) TO DADIS  
DATA COLLECTION FROM DADIS WAS TERMINATED  
ENTER OPTION: [YE] TRY DATA COLLECTION AGAIN  
                  [NO] PROCEED WITH MANUAL ENTRY**  
Respond in the following manner:  
Choose **NO** and proceed with Section 5.6 of this procedure.
- Section 5.6 of this procedure should only be used to perform “WHAT IF” NUREG 1228 DEFAULT dose assessment calculations and should **NOT** be used for event classifications or protective action recommendations.

- Rev 02**

- C. POSITION the cursor over the appropriate **RELEASE POINT(S)** and **CLICK** the mouse once. (The box will become highlighted). \_\_\_\_\_
- D. POSITION the cursor over the **FLOW EX VEL (CFM)** box for the release point chosen and **CLICK** the mouse once. (A pop-up screen will appear). \_\_\_\_\_
- E. INPUT the **exit velocity flow rate** using the pop-up screen by positioning the cursor over the correct values and **CLICKING** the mouse once. \_\_\_\_\_
- **Exit Velocity For HOPE CREEK: ZERO (0)** for all REL PTs.
  - **Exit Velocity For SALEM: ZERO (0)** for REL PTs. 1 and 4
  - **Exit Velocity For SALEM: 95** for REL PT 2
- F. POSITION the cursor over the **EN** box when the appropriate values are inputted and **CLICK** the mouse once. (The box will become highlighted with the flow rate inside the box). \_\_\_\_\_
- G. POSITION the cursor over the **MAX DIST DOWNWIND (MILES)** box and **CLICK** the mouse once. A pop-up screen will appear. \_\_\_\_\_
- H. INPUT **10** using the pop-up screen. \_\_\_\_\_
- I. POSITION the cursor over the **EN** box and **CLICK** the mouse once. (The box will become highlighted with 10 appearing inside the box). \_\_\_\_\_
- 5.6.6 POSITION the cursor over the **AUTO SCENARIO INTEGRATION** box and **CLICK** the mouse once. (The box will become highlighted). \_\_\_\_\_
- 5.6.7 POSITION the cursor over the **CONFIRM** box and **CLICK** the mouse once. (The box will become highlighted and Run Mode and Integration screen will appear). \_\_\_\_\_
- 5.6.8 POSITION the cursor over the **PROJECTED (FORECAST) DOSE** box. \_\_\_\_\_
- 5.6.9 IF the **PROJECTED (FORECAST) DOSE** is highlighted, THEN GO to step 5.6.11. \_\_\_\_\_

- 5.6.10 IF the **PROJECTED (FORECAST) DOSE** box is not highlighted, THEN position the cursor over the box and **CLICK** the mouse once. \_\_\_\_\_
- 5.6.11 POSITION the cursor over the **START DATE INTEG. CURRENT** Box. \_\_\_\_\_
- 5.6.12 IF the **PROJ. TIMES (HRS)** box DOES have **.25, 1, 4, 24** inside of the box and is highlighted, THEN go to Step 5.6.14. \_\_\_\_\_
- 5.6.13 IF the **PROJ. TIMES (HRS)** box doesn't have **.25, 1, 4, 24** inside of it and is not highlighted, THEN POSITION the cursor over the **PROJ. TIMES (HRS)** box and **CLICK** the mouse once. (A pop-up screen will appear in the upper right of the screen). \_\_\_\_\_
- A. INPUT **.25, 1, 4, 24** using the pop-up screen. \_\_\_\_\_
- B. POSITION the cursor over the **EN** box and **CLICK** the mouse once. \_\_\_\_\_
- 5.6.14 POSITION the cursor over the **CONFIRM** box and **CLICK** the mouse once. (The box will become highlighted and the Release Option Selection screen will appear). \_\_\_\_\_
- 5.6.15 POSITION the cursor over the **EVENT TREE NUREG 1228** box and **CLICK** the mouse once. (The box will become highlighted). \_\_\_\_\_
- 5.6.16 POSITION the cursor over the **CONFIRM** box and **CLICK** the mouse once. (The Event Tree NUREG 1228 Selection screen for the different NUREG 1228 default accidents will appear). \_\_\_\_\_
- 5.6.17 POSITION the cursor over the **appropriate accident** and **CLICK** the mouse once. (Choices for the specific accident selected will appear). \_\_\_\_\_
- 5.6.18 POSITION the cursor over the **appropriate selection(s)** and **CLICK** the mouse once. (The Release Timing Selection screen will appear). \_\_\_\_\_
- 5.6.19 POSITION the cursor over the **TRIP CURRENT TIME** box and **CLICK** the mouse once. \_\_\_\_\_
- 5.6.20 POSITION the cursor over the **RELEASE START SAME AS TRIP DATE** box and **CLICK** the mouse once. \_\_\_\_\_



5.6.21 POSITION the cursor over the **CONFIRM** box and **CLICK** the mouse once. (**DO NOT ENTER ANY VALUES IN THE DURATION OR REMAINING DURATION BOXES.** The Weather Selection screen will appear).

5.6.22 PERFORM the following steps to input meteorological data :

**NOTE**

The user will **NOT** be prompted for the **SPD33P (MPH)** if the release is an elevated release.

- A. POSITION the cursor over the **SPD33P (MPH)** box and **CLICK** the mouse once to input the 33 foot elevation wind speed.
- B. POSITION the cursor over the **appropriate number(s)** You wish to enter and **CLICK** the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen).
- C. MOVE the cursor over the **EN** box and **CLICK** the mouse once. [The value chosen will be displayed in specific weather parameter box that is being inputted (i.e. SPD33P MPH)].

**NOTE**

The user will **NOT** be prompted for the **SPD300 (MPH)** if the release is a ground release.

- D. POSITION the cursor over the **SPD300 (MPH)** box and **CLICK** the mouse once to input the 300 foot elevation wind speed.
- E. POSITION the cursor over the **appropriate number(s)** You wish to enter and **CLICK** the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen).

- F. MOVE the cursor over the **EN** box and **CLICK** the mouse once. (The value chosen will be displayed in specific weather parameter box).

**NOTE**

The Default Value of one (1.0) should be used for DT300, if the delta t data is not available. This will produce an "E" stability class.

- G. POSITION the cursor over the **DT300 (DEG.C)** box and **CLICK** the mouse once to input the 300 - 33 foot delta temperature. (The box will become highlighted).
- H. POSITION the cursor over the **appropriate number(s)** you wish to enter and **CLICK** the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen).
- I. MOVE the cursor over the **EN** box and **CLICK** the mouse once. (The value chosen will be displayed in specific weather parameter box).

**NOTE**

MIDAS does not use the value used for the ambient temperature. Twenty (20) degrees should be used.

- J. POSITION the cursor over the **TEMP33 (DEG.C)** box and **CLICK** the mouse once to input the ambient temperature. (The box will become highlighted).
- K. INPUT the value **20** and **CLICK** the mouse once. (The number 20 will be displayed in the top portion of the pop-up screen).
- L. MOVE the cursor over the **EN** box and **CLICK** the mouse once. (The value chosen will be displayed in specific weather parameter box).

- M. POSITION the cursor over the **DT300 (DEG.C)** box and CLICK the mouse once to input the 300 - 33 foot delta temperature. (The box will become highlighted). \_\_\_\_\_
- N. POSITION the cursor over the **appropriate number(s)** you wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). \_\_\_\_\_
- O. MOVE the cursor over the **EN** box and CLICK the mouse once. (The value chosen will be displayed in specific weather parameter box). \_\_\_\_\_
- P. POSITION the cursor over the **RAIN (INCHES)** box and CLICK the mouse once to input the 15 minute average precipitation. (The box will become highlighted). \_\_\_\_\_

**NOTE**

The following values may be inputted if actual rainfall data is not known:

- 0.08 = (Heavy Rainfall)
- 0.02 = (Moderate Rainfall)
- 0.01 = (Light Rainfall)
- The number Zero "0" if it is not raining.

- Q. POSITION the cursor over the **appropriate number(s)** You wish to enter and CLICK the mouse once. (The number you chose will be displayed in the top portion of the pop-up screen). \_\_\_\_\_
- R. MOVE the cursor over the **EN** box and CLICK the mouse once. (The value chosen will be displayed in specific weather parameter box). \_\_\_\_\_

**NOTE**

The **PCT CLOUD COVER REQUIRES SPEED, USE LAST MET DATE**, and **USE DEFAULT MET** boxes should **NOT** be used.

S. POSITION the cursor over **CONFIRM** box and CLICK the mouse once. (The Rad Monitoring Channel screen will appear).

---

5.6.23 POSITION the cursor over the **CONTINUE** box and CLICK the mouse once. (The box will become highlighted and Release Point Data screen will appear).

---

5.6.24 POSITION the cursor over the **CONTINUE** box and CLICK the mouse once. (The box will become highlighted and the Summary of Meteorological Data screen will appear).

---

5.6.25 POSITION the cursor over **CONTINUE** box and CLICK the mouse once. (The calculating screen will appear, while PC MIDAS performs dose assessment calculations. The SSCL will automatically printout and the 10 mile TEDE 4-DAY map will appear on the screen after the calculations are finished).

---

5.6.26 POSITION the cursor to the **CONTINUE** box on the bottom of the screen and CLICK the mouse once. (The **NEXT REPORT** box will replace the **CONTINUE** box).

---

5.6.27 POSITION the cursor over the **NEXT REPORT** box and CLICK the mouse once. (The **MORE REPORTS** box will replace the **NEXT REPORT** box).

---

5.6.28 POSITION the cursor over the **MORE REPORTS** box and CLICK the mouse once. (The More Reports Selection screen will appear).

---

**NOTE**

- Step 5.6.29 provides instructions for utilizing the SSCL Box to print a SSCL to the screen, if the printer is malfunctioning.
- Step 5.6.29 provides instructions for utilizing the SSCL Box to print an additional SSCL.
- A blank SSCL page 2 can be found in ECG Attachment 8 or obtained from Communicator 2.

5.6.29 IF a SSCL needs be printed to the screen or another SSCL printed out, THEN:

- A. POSITION the cursor over the **SSCL** Box and CLICK the mouse once. \_\_\_\_\_
- B. POSITION the cursor over the **CONFIRM** box and CLICK the mouse once. (The SSCL will be printed to the screen, and if the printer is functioning, another SSCL will be printed out). \_\_\_\_\_

5.6.30 POSITION the cursor over the **EXIT** box and CLICK the Mouse once. (The EXIT box will become highlighted). \_\_\_\_\_

5.6.31 CLICK the mouse again. (The Function Selection screen will appear). \_\_\_\_\_

5.6.32 IF another dose assessment calculation and SSCL is needed, THEN REPEAT steps 5.6.1 through 5.6.30. \_\_\_\_\_

5.6.33 IF you need to exit the MIDAS program, THEN:

- A. POSITION the cursor over the **EXIT** box and click the mouse twice. (The Unit Selection screen will appear). \_\_\_\_\_
- B. POSITION the cursor over the **EXIT** box, click the mouse twice. \_\_\_\_\_

## 6.0 RECORDS

Return completed procedure and any information or data thought to be pertinent by the dose assessor, to the Emergency Preparedness Manager.

## 7.0 REFERENCES

### 7.1 References

7.1.1 EPA 400, Manual of Protective Action Guides And Protective Actions For Nuclear Incidents

7.1.2 MIDAS Documentation Volumes 1-5

7.1.3 PSEG Nuclear Emergency Plan

### 7.2 Cross References

7.2.1 NC.EP-EP.ZZ-0310(Q), Radiation Protection Supervisor – Offsite and Field Monitoring Team Response

7.2.2 HC.EP-EP.ZZ-0301(Q), Shift Radiation Protection Response

7.2.3 SC.EP-EP.ZZ-0301(Q), Shift Radiation Protection Response

7.2.4 NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions

## ATTACHMENT 1

Page 1 of 3

## OPERATION OF THE VAX LA120 TERMINAL

1.0 METEOROLOGICAL DATA1.1 Perform The Following to Obtain Current 15 Minute Average Meteorological Data:

1.1.1 DEPRESS the **RETURN** key. (USERNAME should be displayed).

1.1.2 TYPE **M E T** and depress the **RETURN** key

**NOTE**

The most current meteorological data should be printed out followed by the Main Meteorological Menu. If no other keys are depressed, the current 15 minute average meteorological data will be printed out every 15 minutes.

Meteorological data may be obtained from Salem SPDS IAW NC.EP-DG.ZZ-0009(Z), Salem SPDS Operating Instructions.

1.1.3 ENTER **Option 1** (Display Current Meteorological Data) and depress the **RETURN** key to receive the current 15 meteorological data print out.

1.2 Perform The Following Steps to Obtain Archived Meteorological Data:

1.2.1 DEPRESS the **RETURN** key. (USERNAME should be displayed)

1.2.2 TYPE **M E T** and depress the **RETURN** key. (The most current meteorological data should be printed out followed by the Main Meteorological Menu).

1.2.3 ENTER **Option 2** (Display Meteorological Data From Data Base) and depress the **RETURN** key. (Current system Date and Time will be displayed).

## ATTACHMENT 1

## Page 2 of 3

- 1.2.4 IF this is the data you want, THEN depress the **RETURN** key. (Your option will be printed out). \_\_\_\_\_
- 1.2.5 IF you want data from another date and time, THEN go to Step 1.2.6. \_\_\_\_\_
- 1.2.6 ENTER **START DATE** and **TIME** as shown below and depress the **RETURN** key. (For December 27, 1989 at 0130 enter 27-DEC-1989 "depress the space bar once" and enter 01:30). \_\_\_\_\_
- ENTER "Y" if the information is **CORRECT**. \_\_\_\_\_
  - ENTER "N" if the information is **NOT CORRECT** and reenter data as shown in Step 1.2.6. \_\_\_\_\_
- 1.2.7 ENTER the **END DATE** and **TIME** as shown below and depress the **RETURN** key. (For December 28, 1989 at 0230 enter 28-DEC-1989 "depress the space bar once" and enter 02:30). \_\_\_\_\_
- ENTER "Y" if the information is **CORRECT**. \_\_\_\_\_
  - ENTER "N" if the information is **NOT CORRECT** and reenter data as shown in Step 1.2.7. \_\_\_\_\_

2.0 **RMS AND MET DATA (FOR HOPE CREEK ONLY)**2.1 **Perform The Following Steps to Obtain Current Instantaneous RMS and MET Data:**

- 2.1.1 DEPRESS the **RETURN** key. (USERNAME should be displayed). \_\_\_\_\_
- 2.1.2 TYPE **E O F** and depress the **RETURN** key. (A prompt should be displayed asking for PASSWORD). \_\_\_\_\_
- 2.1.3 TYPE **E O F U S E R** and depress the **RETURN** key. (The EOF Plant Menu should be displayed.) \_\_\_\_\_

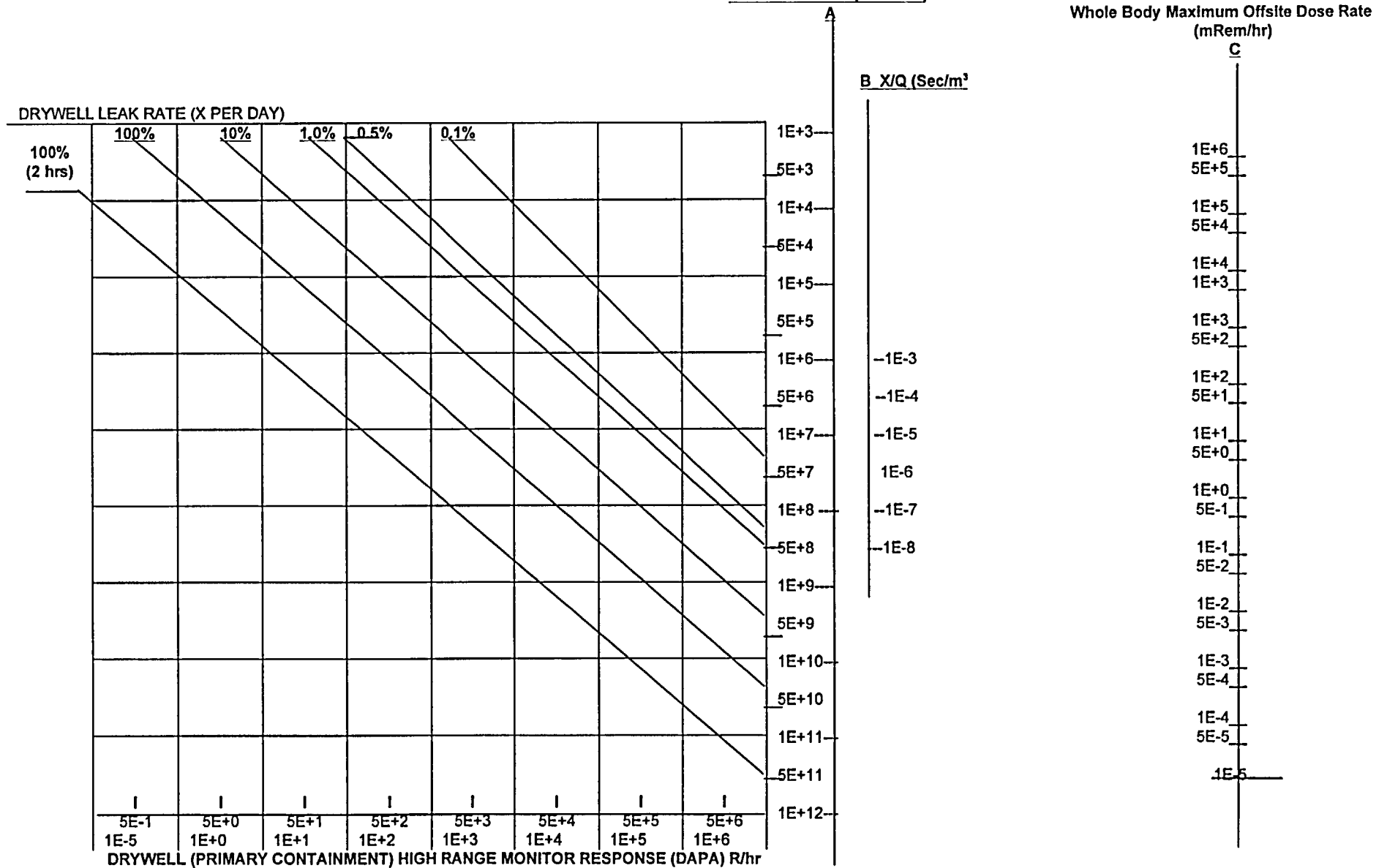


## ATTACHMENT 1

## PAGE 3 OF 3

- 2.1.4 SELECT **Option 1** for Hope Creek. \_\_\_\_\_
- 2.1.5 DEPRESS the **RETURN** key. (The EOF Report Options Menu will be displayed). \_\_\_\_\_
- 2.1.6 ENTER **Option 1 (Current RMS Status)** and depress the **RETURN** key. (The most current instantaneous RMS and 15 minute MET data will be printed out.) \_\_\_\_\_
- 2.2 **Perform The Following Steps to Obtain 15 Minute Average RMS Data:**
  - 2.2.1 DEPRESS the **RETURN** key. (USERNAME should be displayed). \_\_\_\_\_
  - 2.2.2 TYPE **E O F** and depress the **RETURN** key. (A prompt should be displayed asking for PASSWORD). \_\_\_\_\_
  - 2.2.3 TYPE **E O F U S E R** and depress the **RETURN** key. (The EOF Plant Menu should be displayed). \_\_\_\_\_
  - 2.2.4 SELECT **Option 1** for Hope Creek. \_\_\_\_\_
  - 2.2.5 DEPRESS the **RETURN** key. (The EOF Report Options Menu should be displayed). \_\_\_\_\_
  - 2.2.6 SELECT and ENTER **Option 6 (15 Minute Historical Data)**.  
(Current system date and time should be displayed. A prompt should be displayed for start date and time) \_\_\_\_\_
  - 2.2.7 DEPRESS the **RETURN** key for 15 minute average RMS and MET data. (Your selection will be printed). \_\_\_\_\_

TABLE 1-1  
Page 1 of 1  
DRYWELL LEAK RATE NOMOGRAM  
RELEASE RATE (UCI/SEC)



**TABLE 1 - 2**  
**Page 1 of 1**  
**Xu/Q VALUES FOR ELEVATED RELEASES AT HOPE CREEK**  
**(MULTIPLY ALL VALUES BY 1.0E-06)**  
**STABILITY CLASS**

MILES	METERS	A	B	C	D	E	F	G
0.06	100	47.6	9.5	103.2	1.1E-09	1.9E-18	6.4E-49	-----
0.12	200	120.2	105.9	338.9	5.7E-01	1.1E-03	1.7E-13	5.5E-39
0.19	300	77.5	113.3	270.1	16.5	0.72	7.8E-06	4.7E-19
0.25	400	42.7	87.8	194.0	47.4	7.6	7.2E-03	4.8E-11
0.31	500	24.7	65.1	142.0	70.3	22.4	0.22	5.6E-07
0.37	600	15.3	48.9	107.5	81.2	39.3	1.5	1.3E-04
0.44	700	10.1	37.6	84.0	83.7	53.7	4.9	4.1E-03
0.50	800	7.0	29.6	67.4	81.7	63.9	10.6	0.042
0.56 (MEA)	900	5.1	23.8	55.3	77.5	70.3	18.1	0.22
0.79	1270	1.8	12.4	30.5	58.8	73.3	46.6	5.7
1.0	1609	1.1	7.8	20.1	45.6	65.3	57.9	15.0
1.5	2414	0.77	3.5	9.7	27.7	46.1	57.7	31.7
2.0	3218	0.59	2.0	5.8	18.9	34.0	49.6	37.6
2.5	4023	0.48	1.3	3.9	13.9	26.3	42.0	38.3
3.0	4827	0.41	0.89	2.8	10.8	21.2	36.0	37.1
3.5	5632	0.36	0.65	2.1	8.7	17.6	31.2	35.1
4.0	6436	0.32	0.50	1.7	7.2	14.9	27.5	33.0
4.5	7241	0.28	0.40	1.3	6.1	12.9	24.4	31.0
5.0 (LPZ)	8045	0.26	0.34	1.1	5.2	11.3	22.0	29.1
5.5	8850	0.24	0.32	0.93	4.6	10.1	19.9	27.4
6.0	9654	0.22	0.29	0.80	4.0	9.0	18.2	25.8
6.5	10459	0.20	0.27	0.69	3.6	8.2	16.7	24.4
7.0	11263	0.19	0.25	0.60	3.2	7.4	15.4	23.1
7.5	12068	0.18	0.24	0.53	2.9	6.8	14.3	21.9
8.0	12872	0.17	0.22	0.47	2.7	6.3	13.3	20.8
8.5	13677	0.16	0.21	0.42	2.4	5.8	12.5	19.8
9.0	14481	0.15	0.20	0.38	2.3	5.4	11.7	18.9
9.5	15286	0.14	0.19	0.35	2.1	5.1	11.1	18.1
10.0 (EPZ)	16090	0.14	0.18	0.32	1.9	4.7	10.4	17.4
15.0	24135	0.096	0.13	0.17	1.1	2.8	6.6	12.2
20.0	32180	0.074	0.098	0.13	0.72	2.0	4.8	9.4
25.0	40225	0.060	0.080	0.11	0.52	1.5	3.7	7.6
30.0	48270	0.051	0.068	0.090	0.40	1.2	3.0	6.4
35.0	56315	0.045	0.059	0.078	0.32	0.98	2.5	5.5
40.0	64360	0.040	0.053	0.069	0.27	0.83	2.2	4.8
45.0	72405	0.036	0.047	0.062	0.22	0.71	1.9	4.3
50.0	80450	0.032	0.043	0.057	0.19	0.63	1.7	3.9

HOPE CREEK ELEVATED RELEASES

**TABLE 1 - 3**  
**Page 1 of 1**  
**Xu/Q VALUES FOR GROUND RELEASES AT HOPE CREEK**  
**(MULTIPLY ALL VALUES BY 1.0E-06)**  
**STABILITY CLASS**

MILES	METERS	A	B	C	D	E	F	G
0.06	100	351.2	417.0	473.7	517.9	534.9	546.9	552.3
0.12	200	174.6	257.9	344.4	439.8	488.7	525.1	542.6
0.19	300	83.0	159.0	243.5	361.4	435.8	497.1	529.3
0.25	400	43.0	103.6	175.7	295.1	384.3	466.0	513.3
0.31	500	24.6	71.5	131.0	242.5	337.6	433.8	495.5
0.37	600	15.2	51.8	100.8	201.5	296.7	402.2	476.4
0.44	700	10.1	39.0	79.7	169.4	261.6	371.9	456.7
0.50	800	7.0	30.4	64.5	144.2	231.7	343.5	436.7
0.56 (MEA)	900	5.0	24.2	53.3	124.2	206.3	317.1	416.7
0.79	1270	1.8	12.5	29.9	78.4	140.4	237.6	346.3
1.0	1609	1.1	7.9	19.8	56.3	104.8	189.0	296.6
1.5	2414	0.77	3.5	9.7	31.5	62.1	122.5	216.1
2.0	3218	0.59	2.0	5.8	20.7	42.4	88.1	166.9
2.5	4023	0.48	1.3	3.9	15.0	31.5	67.7	134.6
3.0	4827	0.41	0.89	2.8	11.4	24.7	54.4	112.1
3.5	5632	0.36	0.65	2.1	9.1	20.1	45.1	95.6
4.0	6436	0.32	0.50	1.7	7.5	16.9	38.3	83.1
4.5	7241	0.28	0.40	1.3	6.3	14.4	33.2	73.3
5.0 (LPZ)	8045	0.26	0.34	1.1	5.4	12.5	29.2	65.4
5.5	8850	0.24	0.32	0.93	4.7	11.0	26.0	59.0
6.0	9654	0.22	0.29	0.80	4.2	9.8	23.4	53.7
6.5	10459	0.20	0.27	0.69	3.7	8.9	21.2	49.2
7.0	11263	0.19	0.25	0.60	3.3	8.0	19.4	45.3
7.5	12068	0.18	0.24	0.53	3.0	7.3	17.8	42.0
8.0	12872	0.17	0.22	0.47	2.7	6.7	16.5	39.2
8.5	13677	0.16	0.21	0.42	2.5	6.2	15.3	36.6
9.0	14481	0.15	0.20	0.38	2.3	5.8	14.3	34.4
9.5	15286	0.14	0.19	0.35	2.1	5.4	13.3	32.4
10.0 (EPZ)	16090	0.14	0.18	0.32	2.0	5.0	12.5	30.6
15.0	24135	0.096	0.13	0.17	1.1	3.0	7.7	19.5
20.0	32180	0.074	0.098	0.13	0.72	2.1	5.4	14.2
25.0	40225	0.060	0.080	0.11	0.52	1.5	4.2	11.1
30.0	48270	0.051	0.068	0.090	0.40	1.2	3.3	9.1
35.0	56315	0.045	0.059	0.078	0.32	1.0	2.8	7.7
40.0	64360	0.040	0.053	0.069	0.27	0.8	2.4	6.7
45.0	72405	0.036	0.047	0.062	0.23	0.7	2.1	5.9
50.0	80450	0.032	0.043	0.057	0.19	0.6	1.8	5.2

HOPE CREEK GROUND RELEASES